

April 21st, 2020

To the Graduate Program:

This project, entitled “Phonemic awareness transfer from Spanish to English: A way to approach English pronunciation” and written by Jhon Jairo Méndez Rojas, is presented to the Graduate Program of Greensboro College. I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts with a Major in Teaching English to Speakers of Other Languages.

Paula Wilder, Advisor

We have reviewed this
project and recommend its
acceptance

Michelle Plaisance,
Director, Graduate Program in TESOL

Kathleen Keating
Chair, Department of English

Accepted for the Graduate Program

Jane C. Girardi

PHONEMIC AWARENESS TRANSFER FROM SPANISH TO ENGLISH:
A WAY TO APPROACH ENGLISH PRONUNCIATION

Presented to
The Graduated Program of
Greensboro College

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in
Teaching English to Speakers of Other Languages

By
Jhon Jairo Méndez Rojas

May 2020

Advisor: Paula Wilder

Abstract

English pronunciation is usually difficult for novice Spanish-speaking learners. However, developing learners' phonemic awareness in Spanish will later facilitate English pronunciation. Phonemic awareness is the ability to understand that oral language consists of a series of individual sounds or phonemes (Yopp & Yopp, 2000). This ability has shown positive effects in first and second language learning, especially in the development of literacy skills (Corinne, 1998; Friebling, & Namy, 2017; Yopp & Stapleton, 2008). This thesis project presents a workshop that shows teachers of Spanish-speaking ELLs how developing their learners' phonemic awareness in Spanish will leverage English pronunciation. This notion is grounded in the fact that Spanish and English share many consonant sounds (Raynolds, López-velásquez, & Olivo Valentín, 2017). Concepts from cognitive science such as background knowledge, cognitive load, working memory, and chunking substantiate the assumption that being aware of all the phonemes in Spanish will later facilitate English pronunciation for Spanish-speaking ELLs. The workshop presents two different methods to develop Spanish phonemic awareness. The first method is for Spanish speaking children who have not developed their literacy skills in Spanish. The second method is for literate Spanish speakers who are not aware of each individual sound in their first language.

Dedication

I dedicate this thesis to my parents and my brother for being an essential motivation to continue growing both personally and professionally. I also dedicate this to Amy, Mike, Lola, and Violet, my American family. I will never forget their love, support, and, guidance while I was in the United States.

Acknowledgments

I would like to express my sincere gratitude to Professors Abby Dobs, Degania Forston, and Paula Wilder for their outstanding guidance and support. I would also like to thank Dr. Michelle Plaisance for being a continuous source of motivation and orientation throughout the master's program.

Table of Contents

[illegible]

List of Figures

Figures	Page
1 Words novice Spanish-speaking ELLs likely mispronounce	23
2 The leading assumption in this project	24
3 Consonants that sound the same in many cases in English and Spanish	24
4 A word in English and Spanish with a consonant letter that sounds the same	24
5 Background knowledge	25
6 Cognitive load.	25
7 Working memory	26
8 Chunking	26
9 Letters in Spanish	27
10 Sounds in Spanish	27
11 Yeísmo	27
12 Seseo	27
13 Picture # 1	28
14 Picture # 2	29
15 Picture # 3	29
16 Sound /a/	29
17 Sound /e/	30
18 Sound /i/	30
19 Sound /o/	30

Figures	Page
20 Sound /u/	30
21 Sound /a/	31
22 Sound /s/	31
23 Sounds /a/ and /s/	31
24 Sounds /s/ and /a/	32
25 Sound /p/	32
26 Sound /e/	32
27 Sounds /p/ and /e/	33
28 Sounds /e/ and /p/	33
29 Sounds /e/, /s/, /t/, /o/, /p/, and /a/	34
30 Sounds /s/, /t/, /o/, /p/, and /a/	34
31 Sounds /s/, /t/, /o/, and /p/	34
32 Sounds /s/, /o/, and /f/	35
33 Sounds /f/, /o/, and /s/	35
34 Sound /s/ and its corresponding graphemes	36
35 Sound /k/ and its corresponding graphemes	36
36 Combination of the sound /s/ and the vowel o	38
37 Combination of the vowel o and the sound /s/	38
38 Combination of sounds and a vowel /s/, /p/, o, and /t/	38
39 Combination of sounds and a vowel /s/, /t/, o, and /p/	39

Figures	Page
40 Combination of sounds and a vowel /p/, o, /s/, and /t/ . . .	39
41 Combination of sounds and vowels /t/, o, /p/, a, e, and /t/ . . .	39
42 Combination of sounds and vowels /p/, a, e /s/, /t/, and o. . . .	40
43 Combination of sounds and vowels e, /s/, /t/, o, /p/, and a . . .	40
44 Combination of sounds and vowels /s/, /t/, o, /p/, and a . . .	40
45 Combination of sounds and vowels /s/, /t/, o, and /p/. . . .	40
46 Combination of sounds and vowels /p/, o, and /t/. . . .	41
47 Combination of sounds and vowels /t/, o, and /p/. . . .	41
48 Sound /s/ and its corresponding graphemes 	42
49 Sound /s/ and its corresponding graphemes. 	42

Chapter One: Introduction

This thesis project is intended to facilitate the learning of English pronunciation to Spanish speaking learners who have previously developed their phonemic awareness in their first language. This chapter presents the background and rationale behind this project as well as its relevance and applicability. First, I state the background that led to the guiding assumption in this project. Second, I introduce the intended final product and explain its convenience for both English teachers and Spanish speaking learners of English. Finally, I reference some scientific evidence that substantiates this thesis project.

Background

I have gained most of my teaching experience as an EFL educator in a Spanish speaking country. English pronunciation has been one of the major challenges for most of my students. Usually, when my Spanish speaking learners start attempting the articulation of isolated words in English, most of them are faced with concepts and skills they are unfamiliar with in their native language. For instance, I have found that most learners cannot tell the difference between the sound (phoneme) and the name of the letter (grapheme). Likewise, they find it difficult to pronounce certain consonant sounds in isolation or in positions that are not common in Spanish. This is, presumably, the reason why they say, for instance, /'esneɪk/ instead of /'sneɪk/. In Spanish there are no words that begin with the letter *S* followed by another consonant sound. Conversely, in English it is very common to find this letter in the initial position and followed by another consonant sound as in the words *snake*, *stamp*, and, *spot*.

I have discovered during my teaching experience that early on during their learning process most Spanish speaking learners of English have difficulty pronouncing English words with combinations of sounds that are rare or simply do not exist in Spanish. Learners usually struggle to articulate English words ending with /b/, /f/, /g/, /k/, /m/, /p/, /t/, and /v/. However, despite their morphological differences, Spanish and English are both orthographic languages and share the same alphabetic system as well as many pronunciation patterns. This is why I believe developing ELLs' phonemic awareness in Spanish and then transferring that knowledge to the L2 will facilitate their learning of English pronunciation as well as their general understanding of the phonological similarities and differences between these two languages. I strongly believe it will be easier for learners to develop better pronunciation in English once they know the individual sounds or phonemes that make up their native language, how they are combined to make words, and which ones can be transferred to the L2 to facilitate the pronunciation of English words.

The Intended Outcome and its Relevance

This thesis project presents a workshop intended to show English language teachers of Spanish speaking learners how to develop their students' phonemic awareness in their native language. Through this workshop, teachers will also learn strategies to practice articulating combinations of sounds with phonemes shared by both languages, which are rare and nonexistent in Spanish, but common in English.

Spanish speaking learners of English would benefit greatly from building a conscious phonetic background in their native language. Eventually, learners can use their Spanish phonemic awareness as a starting point or prior knowledge in order to improve their English

pronunciation. Academia and experience within the classroom have validated the idea that memory is associative and new information can be better stored and retrieved if it can be connected to previously acquired knowledge (Willingham, 2009). Moreover, I have seen many ELLs feeling overwhelmed when dealing with English pronunciation early on in their learning process because they need to cope with several pieces of new information at the same time. They are expected to remember the definition of a new word, its spelling, and also its pronunciation. If teachers can manage to reduce their learners' cognitive load by breaking down new information in the L2, chances are learners will be more able to store new information in their memory and retrieve it in the future (Willingham, 2009). In other words, Spanish speaking learners could benefit from learning the individual sounds in their native language first and later use that knowledge to leverage their learning of new English vocabulary. If learners are already familiar with the articulation of individual sounds found in Spanish and English, chances are they will be able to progress in their learning of English pronunciation more steadily and expeditiously.

Rationale

Phonemic awareness has been the focus of a significant number of research studies in relation to both first and second language learning (Beth, Malikka, Yussof, & Siew, 2019; Brice & Brice, 2009; Freeman & Freeman, 1999; Griffith & Olson, 1992; Kenner, Terry, Friehling, & Namy, 2017; Walter, 2010). This phonological skill has also been studied in relation to the transfer of the mother tongue phonetic system into the learning of second language pronunciation (Chang & Heift, 2015; Hu & Schuele, 2005; Zheng & Liu, 2018). However, the literature reviewed for this thesis project reflected no evidence of a likely relationship between Spanish phonemic awareness and English pronunciation despite the shared alphabetic system, the

multiple similarities between the grapheme-phoneme correspondence in these two languages, and the abundant research claiming the positive effects of phonemic awareness on different aspects of language learning.

Therefore, the workshop presented in this thesis project based on the research will help English language teachers better serve their students' needs regarding explicit instruction focused on English pronunciation. Once teachers develop their Spanish speaking learners' phonemic awareness in their native language, learners will be able to transfer a substantial portion of that knowledge to better learn English pronunciation. There is scientific evidence of cross-language transfer between different languages in various linguistic fields, such as phonology, morphology, and syntax (Durgunoglu, 2002; Hartsuiker & Bernolet, 2017; Lam & Chen, 2018). Hence, I reiterate my assumption that Spanish speaking learners of English will be able to use their native language phonemic awareness to articulate English words containing phonemes they already know in Spanish, but that are arranged in different patterns in the L2.

Chapter Two: Literature Review

In this chapter, I review scholarship supporting the leading assumption in this thesis project. I begin with a comprehensive definition of phonemic awareness. I then provide an overview of research showing positive connections between phonemic awareness and first and second language learning. At the moment of doing the literature review for this project no scholarship was found to substantiate a direct connection between phonemic awareness in Spanish and English pronunciation. Therefore, I complete the review considering premises from cognitive science that would validate the proposition of developing phonemic awareness in Spanish first to later facilitate the learning of English pronunciation.

Phonemic Awareness

According to Yopp (1995), “Phonemic awareness, as the term suggests, is the awareness of phonemes, or sounds, in the speech stream. It is the awareness that speech consists of a series of sounds” (p. 20). Being phonemically aware means being able to understand that oral language consists of a series of individual sounds or phonemes, which are the smallest units of sound that make a difference in communication. The difference between the words dog and hog, for example, is determined by only one phoneme (Yopp & Yopp, 2000). Frequently, phonemic awareness is confused with phonological awareness. These two terms are often used interchangeably. However, technically phonemic and phonological awareness are two different levels of metalinguistic skill. Indeed, phonemic awareness is part of the more general phonological awareness. Washburn, Binks-Cantrell, Joshi, Martin-Chang, and Arrow (2016)

referred to phonemic awareness as “A subcomponent of phonological awareness and is characterized by the ability to notice, think about, or manipulate the individual sounds in spoken words (phonemes)” (p. 8) whereas phonological awareness includes phonemic awareness as well as syllabic and onset-rime awareness (Yopp & Yopp, 2009).

Phonemic Awareness and First Language Development

Phonemic awareness has been consistently identified over the years as a powerful predictor of literacy achievement in the L1 (Corinne, 1998; Griffith & Olson, 1992; Kenner, Terry, Friehling, & Namy, 2017; Wasik, 2001). There is research showing a direct link between phonemic awareness and reading development. For example, Snider (1997) explored the connection between phonemic awareness in kindergarten and reading achievement at the end of second grade. At the beginning of the study, Snider (1997) tested 73 kindergarten students, aged five to seven, and their ability to identify rhyming and odd phonemes in English as the L1 as well as to isolate and delete sounds in words. Snider (1997) found that those children who developed higher levels of phonemic awareness in kindergarten would later obtain higher scores on standardized reading tests that were given to all students at the end of second grade. Consequently, those students who struggled to start developing phonemic awareness in kindergarten registered low scores in the same standardized reading tests. Through this study, Snider (1997) found that, with these students, phonemic awareness was indicative of better reading achievement. However, Snider (1997) also stated that students’ performance on this metalinguistic skill could not be the only source for educational decision making about student promotion and retention. Instead, low levels of phonemic awareness in young learners should be understood as a mandate to provide explicit training on this skill as part of students’ early

reading instruction. A year later, Muter and Snowling (1998) investigated, among other variables, the continuous role of phonemic and rhyme awareness in concurrent and subsequent reading development. For five years, Muter and Snowling (1998) administered multiple tests to a group of 34 English native speaking children, aged nine to ten. Tests measured rhyme and phoneme awareness, letter name knowledge, and phonological working memory. At the end of the study, Muter and Snowling (1998) found that, with these children, rhyming ability was not a significant predictor of reading development. Conversely, the results of this study showed that phonemic awareness was a strong predictor of reading accuracy both in the short term, at age five, and in the long term at age nine (Muter & Snowling, 1998).

There is also scholarship connecting phonemic awareness to other areas of first language learning (Loeb, Gillam, Hoffman, Brandel, & Marquis, 2009; Lombardino, Bedford, Fortier, Carter, & Brandi, 1997; Miller, 2007; Orton, 2000). For instance, Frost (2001) examined the connection between phonemic awareness, spelling development, and the subsequent effect on children's early invented writing. In this research, Frost (2001) administered a variety of tests on six occasions to 44 first graders from the start of first grade until the middle of second grade. Tests included measures of language comprehension, phonological awareness, and spontaneous writing. Children were divided into two groups based on their level of phonemic awareness at the beginning of the study. Frost (2001) found that children with a high level of phonemic awareness were more prone to develop spelling and reading competence than those children with low phonemic awareness. Therefore, children who were phonemically aware produced invented writing with higher rates of spelling precision. Frost (2001) concluded phonemic awareness was a critical step in the development of letter knowledge and word processing, which directly affects children's advancement of their literacy skills. In a different study, Kamii and Manning (2002)

replicated research first conducted in Spanish to measure the correlation between phonemic awareness and the beginning of reading and writing. Sixty-eight kindergartners participated in Kamii and Manning's study. Kamii and Manning (2002) interviewed every child twice on two consecutive days. The children's writing skill was measured during the first session through the dictation of pairs of words that children were familiar with, but that they did not know how to write out. The children's ability to segment words into their individual phonemes was tested on the second session. The phonemic awareness test consisted of two subtests, the picture task and the written-word task. Kamii and Manning (2002) divided the 68 kindergartners into two groups and administered the picture task to one group and the written-word task to the second group. In both tests, the goal was to measure the children's ability to segment common words into their constituent phonemes. Kamii and Manning (2002) found there was a strong relation between the children's level of oral segmentation and their writing skills. Kamii and Manning (2002) concluded that with the participants in the study there was a direct connection between phonemic awareness in English and beginning reading. However, Kamii and Manning (2002) went further and stated that children's writing level was another way to assess their phonemic awareness. Kamii and Manning (2002) affirmed that children examine their own speech while writing and, through the examination, they would be more able to discriminate the individual sounds in a word.

Furthermore, Ashby, Dix, Bontrager, Dey, and Archer (2013) investigated the relationship between phonemic awareness in second grade and silent reading fluency a year later in third grade by measuring eye movement during picture matching tasks and silent sentence reading. Ten children, whose ages ranged between seven and eight, participated in this study. Ashby et al. (2013) tested the children's ability to match pictures illustrating words with the

same first or last sound as well as the children's ability to identify the correct spelling for an illustrated word on a screen. Additionally, Ashby et al. (2013) tested the children's silent reading fluency by tracking eye movement with a software that measured the time spent looking at a single word while reading. Ashby et al. (2013) found the results indicated that phonemic awareness contributed to text reading fluency even beyond what previous studies had concluded. Ashby et al. (2013) stated that the level of phonemic awareness that children had in second grade was highly likely to predict the level of silent reading fluency a year later in third grade. In summary, there is research that shows positive contributions from phonemic awareness to the development of linguistic skills in the first language. Similarly, there is research that shows beneficial connections between phonemic awareness in the L1 and second language learning.

Phonemic Awareness and Second Language Learning

The conception of the leading assumption in this thesis project originated from research studies in which the focus was the effect of Spanish phonemic awareness on the development of Spanish literacy skills in five-year-old children in Colombia (Gil & Méndez, 2015; Méndez & Díaz, 2007). After these studies, participants who received instruction in English as a foreign language evidenced a relative ease to pronounce isolated words in the L2 with combinations of sounds that are rare or nonexistent in Spanish (Gil & Méndez, 2015; Méndez & Díaz, 2007). Although the effect of first language phonemic awareness on second language learning was not investigated in the aforementioned studies, there is research showing connections between phonemic awareness in the first language and second language learning (Atwill, Blanchard, Gorin, & Burstein, 2007; Janssen, Segers, McQueen, & Verhoeven, 2017; Speciale, Ellis, & Bywater, 2004; Wise, D'Angelo, & Chen, 2016).

For instance, Jill and Michael (2005) investigated whether phonological processes showed cross-linguistic transfer and how the language of instruction influence the relationship between phonological processes and decoding. Jill and Michael (2005) also explored whether performance on Spanish and English phonological processing tasks similarly predicted English decoding for the same English learners. To answer these questions a quasi-experimental group contrast design was employed with 90 Spanish-speaking students from seven first-grade classrooms at two elementary schools (monolingual and bilingual) in two different public-school districts. Participants were individually tested on three phonological abilities the study focused on. Jill and Michael (2005) used descriptive statistics to compare students' scores from both the monolingual and bilingual schools. The results indicated that phonological processes exhibited cross-linguistic transfer in young ELs, and that language of instruction influenced English and Spanish word reading and Spanish pseudoword decoding, but not English pseudoword decoding (Jill & Michael, 2005). Likewise, Jill and Michael (2005) found phonological awareness was the only theoretical phonological processing construct significantly related to all English and Spanish reading tasks. Jill and Michael's results (2005) suggest that English teachers should reexamine what is being instructed and how it is instructed since ELs are failing to make progress in reading English words despite instruction in English, and students could actually benefit more from direct, intensive instruction in Spanish phonological awareness (Jill & Michael, 2005).

Following the same line of argumentation, Yopp and Stapleton (2008) compiled quantitative evidence from research in orthographic languages around the world supporting the hypothesis that phonemic awareness in Spanish favors ELLs' reading acquisition in English. Yopp and Stapleton (2008) cited multiple experimental and correlational studies in which

children between five and seven years old benefited from previous development of phonemic awareness in their native languages (Danish, French, German, Spanish, Portuguese, Swedish and Turkish) to acquire reading skills in English. In the multiple studies referenced in Yopp and Stapleton's article, different tests were administered to determine levels of sound awareness in native language as well as levels of transferability to English phonemic awareness and its effect on the development of English reading skills (Yopp & Stapleton, 2008). The results of all the studies cited by Yopp and Stapleton (2008) validated the thesis that encouraging English-language learners to develop phonemic awareness in their primary language facilitated the development of their English reading skills. According to Yopp and Stapleton (2008), these findings suggest that educators of ELLs should also support students' phonemic awareness in their native language.

Sun-alperin and Wang (2011) reached a similar conclusion at the end of a study positing that phonological skills in Spanish as the L1 could facilitate reading and spelling skills in English as the L2. Sun-alperin and Wang (2011) also hypothesized that L1 orthographic skills were likely to facilitate L2 reading even more than phonological skills. To demonstrate these propositions, a correlational study was carried out in which the statistical relationship between phonological and orthographic processing skills in Spanish and English were measured and assessed (Sun-alperin & Wang, 2011). Eighty-nine native Spanish-speaking ESL learners participated in this study. Sun-alperin and Wang (2011) identified possible correlational relationships between phonological skills in Spanish as the L1 and reading and spelling skills in English as the L2. Regarding the first hypothesis, Sun-alperin and Wang's findings (2011) showed that the phonological skills of the participants in the L1 facilitated reading and spelling skills in the L2. A second conclusion was that orthographic processing skills in Spanish did not

transfer to English spelling (Sun-alperin & Wang, 2011). Sun-alperin and Wang's conclusions (2011) suggest that ESL/EFL teachers could better serve their native Spanish-speaking students, once educators understand that learners' strong L1 phonological skills could leverage the development of their literacy skills in English as the L2. Moreover, Sun-alperin and Wang (2011) noted that ESL/EFL teachers could identify more effective interventions related to developing general phonological awareness in English and letter-sound correspondence, once they assess their Spanish-speaking students' phonological and orthographic processing skills in their native language (Sun-alperin & Wang, 2011).

Likewise, in a broader study on first language transfer to second language learning, Sparks, Patton, Ganschow, Humbach, & Javorsky (2006) investigated what the best native language predictors of foreign language proficiency and aptitude were. For ten years, Sparks et al. (2006) tested 54 English native-speaking students who took two years of Spanish, French, and German as foreign languages at school. During that period of time, every student was administered the same set of eight different native language tests at different intervals during the completion of the study. Tests implemented covered all four language domains as well as cognitive ability and language aptitude. Students' overall performance on those tests was compared with scores on foreign language proficiency once it was possible to assess it. Sparks et al. (2006) found that native language literacy measures were predictors of foreign language proficiency and that native language achievement and general verbal intelligence were strong predictors of foreign language aptitude. The results also showed that skills in phonological processing were important for written language development and oral proficiency in a foreign language (Sparks et al., 2006). Once again, these findings suggest that foreign language educators should not underestimate the important role of first language development in all

language domains and the subsequent effect on students' oral and written proficiency and achievement in the L2 (Sparks et al., 2006).

Additionally, Ijalba and Obler (2015) reached similar conclusions in their study. Ijalba and Obler (2015) reported the comparison of first-language orthographic transparency and its influence on how monolingual English and Spanish readers learn a novel writing system. Forty adult language learners, 20 Spanish native speakers and 20 English native speakers participated in this study. To answer the research question, Ijalba and Obler (2015) created a novel script with two different types of grapheme-phoneme correspondences, one transparent and one opaque, that all participants learned and were later tested on. Descriptive statistics were implemented to analyze the data collected in this experiment. Results indicated that learners whose primary language is more transparent regarding grapheme-phoneme correspondence were more likely to struggle learning languages with more opaque correspondences (Ijalba & Obler, 2015). Ijalba and Obler (2015) stated that a likely explanation when decoding in transparent orthographies was that phonological awareness was reinforced by the consistency of the speech-to-print associations. Ijalba and Obler (2015), based on this study, suggested that developing phonological awareness in the first language when it is transparent is likely to facilitate the learning of other orthographic languages with opaquer phoneme-grapheme correspondences.

Phonemic Awareness and Cognitive Science

The leading assumption for this project is that developing phonemic awareness in Spanish as the L1 will facilitate the learning of English pronunciation as the L2. This assumption is grounded in the fact that Spanish and English are both orthographic languages and share the same alphabetic system as well as many consonant sounds (Raynolds, López-velásquez, & Olivo

Valentín, 2017). If Spanish-speaking learners of English are able to pronounce and manipulate, in isolation, the different sounds they use in Spanish, it will be presumably easier for them to pronounce, for instance, English words ending in consonant sounds such as /b/, /f/, /g/, /k/, /m/, /p/, and /t/, which are common in English, but rare or nonexistent in Spanish. However, the scholarship reviewed for this project reflected no evidence of a likely relationship between Spanish phonemic awareness and English pronunciation despite the shared alphabetic and phonological features between these two languages. Notwithstanding, ideas from cognitive science such as background knowledge, cognitive load, working memory, and chunking could certainly support the hypothesis that developing phonemic awareness in Spanish, before instructing learners on English pronunciation, could facilitate the articulation of words in the L2.

Background knowledge.

Memory is the first resource learners use when faced with something new. Memory retrieval is what actually lies behind logical thinking. When learners are faced with a problem, they will first search for a solution in their memory (Willingham, 2009). Therefore, following the premise that “memory is the cognitive process of first resort” (Willingham, 2009, p. 37), it could be hypothesized that developing Spanish-speaking learners’ phonemic awareness in their first language will eventually serve as background knowledge when ELLs start learning English pronunciation. This hypothesis shows consistency with the idea that a higher number of associations between new and existing knowledge enables retrieval from the long-term memory, which in turn assists in the assimilation of new input (Dirksen, 2016). This assumption, once again, is grounded in the fact that both languages share the same alphabetic system and most consonant sounds are pronounced the same or very similar in both languages.

Cognitive load, working memory, and chunking.

When novice ELLs learn vocabulary in the L2, they need to process multiple pieces of new information simultaneously. New vocabulary in the L2 usually represents a multifaceted task for learners that entails learning of the meaning, the spelling, and the pronunciation of every new word. The processing of a new meaning, spelling, and pronunciation represents a cognitive load for ELLs. Therefore, this multifaceted task of learning new vocabulary in English requires ELLs to use their working memory in order to consciously process the new information or input. According to Cowan (2014), “Working memory is the retention of a small amount of information in a readily accessible form” (p. 197). Likewise, the principle of cognitive load theory is that mental capacity in working memory is limited (de Jong, 2010). Consequently, processing new vocabulary in English and succeeding in the multiple and simultaneous tasks associated will be presumably easier if ELLs can break apart such tasks. This proposition arises from the idea that working memory can operate more easily with new information when it can be chunked (Willingham, 2009). According to Xu (2016), “Chunking is the process of arranging and grouping bits of information into familiar units or chunks” (p. 122). However, chunking works more effectively when there is already background information in the long-term memory (Willingham, 2009). Hence, when Spanish-speaking ELLs learn new vocabulary in the L2, the cognitive load could be minimized, and the processing of the new input could be optimized if learners already have a phonetic background in their first language to assist in the learning of English pronunciation. ELLs could use their Spanish phonemic awareness to learn how to pronounce words in English containing sounds that learners also use in their native language and that they already know how to manipulate in isolation.

Conclusion

In summary, phonemic awareness has consistently shown positive effects on language learning. All the scholarship referenced in this chapter supports the idea that phonemic awareness helps advance language development in both the first and second language. Although the literature reviewed for this project did not show a connection between Spanish phonemic awareness and English pronunciation, ideas from cognitive science substantiate the leading assumption in this thesis project. In the following chapters, I explain how the workshop presented in this project helps teachers of Spanish-speaking English learners develop ELs' phonemic awareness in their first language to later facilitate the learning of English pronunciation.

Chapter Three: Project Design

In the previous chapters, I introduced the hypothesis that developing phonemic awareness in Spanish is likely to later facilitate the learning of English pronunciation for Spanish-speaking learners. I then referred to research that shows how phonemic awareness positively affects both first and second language learning and also how certain premises from cognitive science validate the hypothesis in this project. This chapter discusses why the workshop presented in this thesis project will help English language teachers instruct their Spanish-speaking learners in English pronunciation. The workshop is intended to show teachers the benefits of developing Spanish-speaking learners' phonemic awareness in their first language prior to the instruction of English pronunciation.

Some Differences and Similarities between English and Spanish

English and Spanish are both Indo-European languages grouped in two different language families. English is part of the West Germanic languages, while Spanish is within the Italic family (Meyer, 2009). Consequently, aspects such as word formation and grammar are different between these two languages. However, despite the differences between English and Spanish, these two languages also share aspects in common that could leverage the learning of English for Spanish-native speakers and vice versa. For instance, English and Spanish share many cognates, words that are similar or even identical in two languages. Likewise, these two languages use the same alphabet to form their words. The only difference is the letter *Ñ*, which is used only in Spanish. Moreover, even though vowels (*A, E, I, O*, and *U*) make at least 14

different sounds in English (Meyer, 2009) and only five sounds in Spanish, there are substantial similarities in the way consonant letters are pronounced in both languages (Raynolds, López-velásquez, & Olivo Valentín, 2017). Letters *b*, *c*, *d*, *f*, *g*, *k*, *l*, *m*, *n*, *p*, *q*, *s*, *t*, and *x* sound the same in many cases both in English and Spanish. The letter *r* sounds the same in both languages when it is a voiced alveolar tap or flap as in the words *Carolina* and *mesera* (Spanish word for waitress). In addition, the combination *ch* in initial position in English as in the word *chat* sounds the same in Spanish as in the words *chico* (boy) and *muchacha* (young woman). This thesis project posits that being aware of these phonetic similarities between English and Spanish, specifically at the consonant sound level, could help Spanish-speaking ELLs approach English pronunciation more effectively and expeditiously.

My Experience with Spanish and English Sounds

I started learning English as a foreign language when I was 17 years old. Pronunciation was one of the most remarkable differences I found between English and Spanish. When I was still a novice learner, I faced difficulty to pronounce words such as *name*, *snake*, *stop*, *loft*, *spend*, and *long*, among many more. Besides the challenge to understand that the same five vowels used in English and Spanish are pronounced in at least 14 different ways in English, I also had trouble to pronounce words in the L2 that require the articulation of consonant sounds in positions that are rare or nonexistent in Spanish. This struggle is likely to occur due to the morphological differences between English and Spanish. Even though both languages use the same alphabet, letters are arranged in different patterns to form words. Furthermore, when I learned how to read in Spanish, I was not taught how to pronounce all the letters in the alphabet in isolation. Consonants were combined with a vowel sound to make a syllable. Likewise, I was not aware of

the difference between sounds and letters. This type of instruction was still highly prevalent in the educational system in my country 17 years later when I conducted a research project on the teaching of literacy skills in Spanish (Méndez & Díaz, 2007) and persisted 25 years later as evidenced in another study (Gil & Méndez, 2015). When I became an EFL teacher in my native country, I noticed students of all ages faced the same difficulties with pronunciation I experienced as an English learner. Early on during their learning process, my students have had difficulty to correctly pronounce words such as *snake* or *long*. They would say /'esneɪk/ instead of /'sneɪk/ and /'lɒn/ instead of /'lɒŋ/. Based on my personal and professional experience, I assume this difficulty occurs because Spanish-speaking learners are usually not aware of the individual sounds in the speech stream. In other words, they lack phonemic awareness. Subsequently, learners are very likely to struggle when they start learning English pronunciation and are expected to discriminate and manipulate individual sounds that also exist in Spanish but are arranged in different patterns from the ones learners know how to pronounce in their first language. However, that struggle can be minimized if English language teachers help their learners develop their phonemic awareness in Spanish before learners start attempting the articulation of new vocabulary in English.

A Workshop to Develop Spanish Phonemic Awareness

Memory is the first resource learners use when faced with something new (Willingham, 2009). Following that premise, this thesis project presents a workshop intended to show English language teachers why it is beneficial to develop their Spanish-speaking learners' phonemic awareness in Spanish prior to the teaching of English pronunciation. Teachers will learn practical strategies they can use in their classrooms to help their students become aware of the individual

sounds that shape their first language. Additionally, teachers will learn about activities they can implement to help their learners enunciate individual consonant sounds in different positions. The ultimate goal is for teachers to help their learners build a phonetic background in Spanish that learners can eventually transfer to the L2 and will facilitate the mastery of English pronunciation. That transfer is likely to be quite helpful since developing phonological awareness in the first language when it is transparent is likely to facilitate the learning of other orthographic languages with opaquer phoneme-grapheme correspondences (Ijalba & Obler, 2015). Spanish has a transparent phoneme-grapheme correspondence, which means letters are pronounced generally the same way regardless of their position in a word or the preceding or succeeding letters. Conversely, English has an opaquer phoneme-grapheme correspondence; therefore, letters could change their pronunciation depending on their position in a word or the letters before or after. Additionally, being able to isolate and manipulate the individual sounds in Spanish will reduce learners' cognitive load and increase their working memory when they first learn how to pronounce words in English containing sounds that learners are already familiar with in their L1. If Spanish-speaking learners of English are able to master pronunciation in the L2 more efficiently after they have developed their phonemic awareness in Spanish, it will be presumably easier for learners to advance in their English learning process. This assumption is based on the idea that having to devote less working memory to assimilate the pronunciation of new arrangements of sounds in English could enable learners to cope with more new input in the L2. Therefore, developing phonemic awareness in Spanish is likely to result in positive contributions to the overall English learning process. The next chapter presents a detailed description of how English language teachers can help their Spanish-speaking ELLs better

approach pronunciation in the L2 and ultimately be more successful as learners undertake the mastery of English as a second or foreign language.

Chapter Four: The Project

This chapter details a workshop intended to show teachers of Spanish-speaking learners of English how to develop their learners' phonemic awareness in Spanish and use that knowledge to later facilitate ELLs' learning of English pronunciation. The intended participants for this workshop are elementary, middle, and high school English language teachers as well as teachers of adult Spanish-speaking learners of English. The delivery of the workshop is supported by a PowerPoint presentation (See Appendix A). This workshop is divided into four stages. The first stage defines phonemic awareness and broadly discusses its effect on first and second language learning. This stage also presents the leading assumption for this thesis project and shows how ideas from cognitive science validate this project. The second stage shows how to develop illiterate Spanish speakers' phonemic awareness in their L1. The third stage shows how to develop literate Spanish speakers' phonemic awareness in their L1. Finally, the fourth stage offers some suggestions on resources teachers can use to develop their learners' phonemic awareness. This stage also elicits additional resources and possible activities from attendees at the workshop.

First Stage: Phonemic Awareness and Language Learning.

The objective of this stage is to show attendees at the workshop the relevance and applicability of developing their learners' Spanish phonemic awareness in their L1 to leverage the learning of English pronunciation as the L2. This stage consists of three different steps. The first step presents the definition of phonemic awareness and shows its role in first and second

language learning. The second step introduces the leading assumption for this thesis project and presents some examples. The third step shows how certain ideas from cognitive science validate the leading assumption in this project. Following, the three steps that frame the first stage of this workshop are explained in more detail.

First step: definition of phonemic awareness and its role in language learning.

This step begins questioning attendees whether they have ever noticed Spanish-speaking novice learners of English having difficulty pronouncing words in the L2 that contain sounds they also use in their L1 but arranged in combinations that are rare or nonexistent in Spanish (Figure 4.1. See also Appendix A, Slide 5).

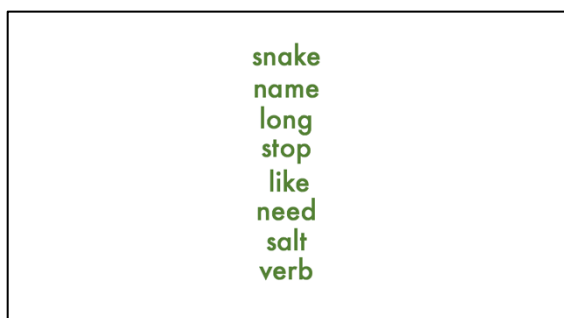


Figure 4.1: Words novice Spanish-speaking ELLs likely mispronounce.

Next, attendees at the workshop are orally questioned whether their learners' difficulty to pronounce such combinations of sounds is likely to occur because of learners' low or missing phonemic awareness in Spanish. Later, attendees either learn or recall what phonemic awareness is as well as its role in first and second language learning as substantiated by research.

Second step: the leading assumption for this thesis project.

In this step, some similarities and differences between English and Spanish are listed. The fact that consonant letters sound the same in many cases both in English and Spanish (Raynolds, López-velásquez, & Olivo Valentín, 2017) serves to introduce the leading assumption for this project (Figures 4.2 & 4.3. See also Appendix A, Slides 17 & 19). Next, attendees see some examples of real words in English and Spanish containing consonant letters in initial position that sound the same in both languages (Figure 4.4. See also Appendix A, Slides 20-37).

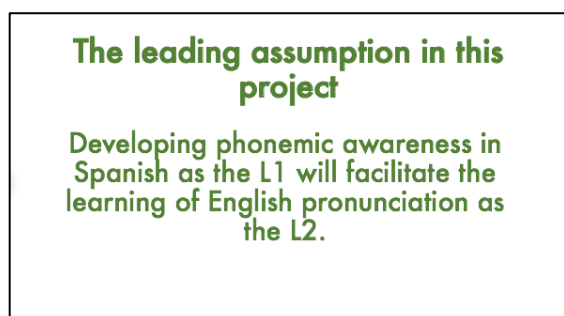


Figure 4.2: The leading assumption in this project.

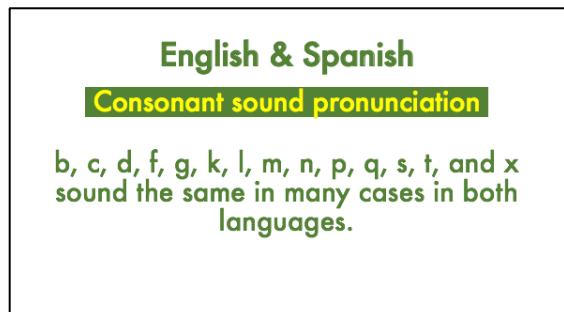


Figure 4.3: Consonants that sound the same in many cases in English and Spanish.

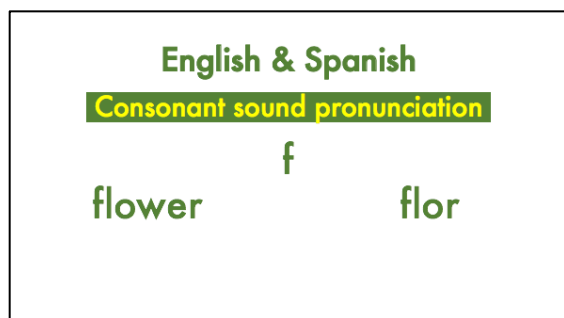


Figure 4.4: A word in English and Spanish with a consonant letter that sounds the same.

Third step: phonemic awareness and cognitive science.

This last step introduces four ideas from cognitive science (background knowledge, cognitive load, working memory, and chunking), which could validate the relevance of this thesis project. The goal in this step is to show attendees at the workshop how each of those four premises from cognitive science can substantiate the idea that developing phonemic awareness in Spanish as the L1 will facilitate the learning of English pronunciation as the L2 (Figure 4.5, 4.6, 4.7, & 4.8. See also Appendix A, Slides 39-54). Once this last step in the first stage has been completed, the workshop continues with the second stage.

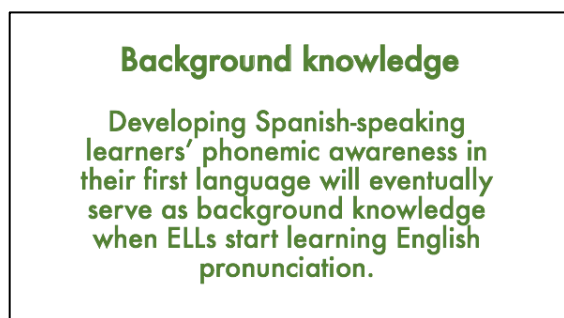


Figure 4.5: Background knowledge.

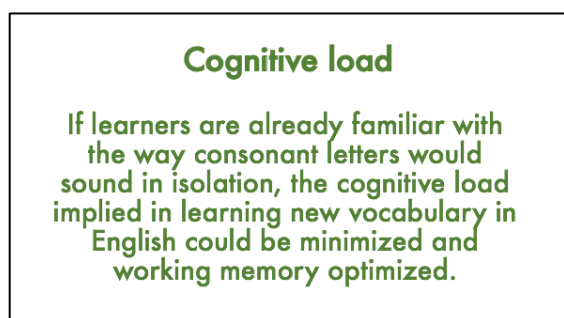


Figure 4.6: Cognitive load.

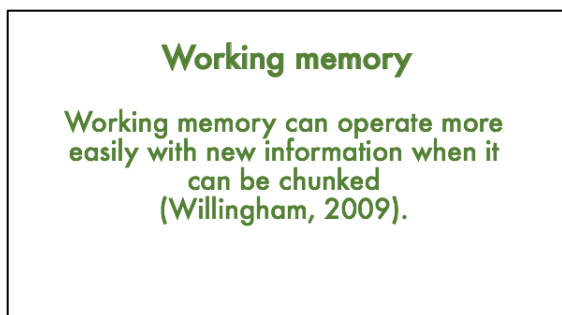


Figure 4.7: Working memory.

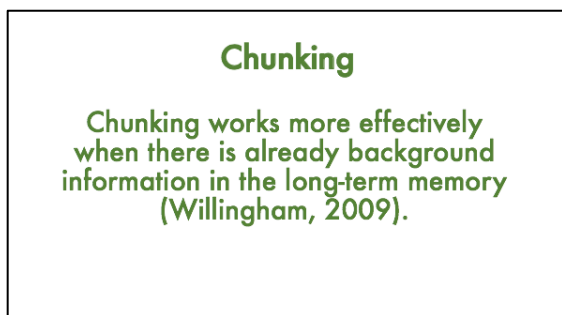


Figure 4.8: Chunking.

Second Stage: Developing Illiterate Spanish Speakers' Phonemic Awareness in their L1

The objective of this stage is to show attendees at the workshop how to develop Spanish phonemic awareness in children who do not know how to read and write in their first language. This stage is developed through a five-step procedure: initial sound identification, sound combination, syllable combination, logic, and phoneme-grapheme correspondence.

First step: initial sound identification.

In this first step, the objective is to show attendees how to teach children every phoneme in Spanish. According to the Real Academia Española (2020), there are 27 official letters in Spanish and between 23 and 25 sounds depending on the region where Spanish is spoken (Figures 4.9, 4.10, 4.11, & 4.12. See also Appendix A, Slides 59-66).

Initial sound identification

There are 27 letters in Spanish:

a, b, c, d, e, f, g, h, i, j, k, l, m, n, ñ,
o, p, q, r, s, t, u, v, w, x, y, z

<https://www.rae.es/consultas/exclusion-de-ch-y-ll-del-abecedario>

Figure 4.9: Letters in Spanish.

Initial sound identification

There are 23-25 phonemes in Spanish:

/a/, /b/, /k/, /ch/, /d/, /e/, /f/, /g/,
/i/, /j/, /l/, /ll/, /m/, /n/, /ñ/, /o/, /p/,
/r/, /rr/, /s/, /t/, /u/, /ks/, /y/, /z/

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Figure 4.10: Sounds in Spanish.

Initial sound identification

In most Spanish speaking countries,
/ll/ and /y/
sound the same (yeísmo).

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Figure 4.11: Yeísmo.

Initial sound identification

In most Spanish speaking countries,
/c + e, i/, /s/, and /z/
sound the same (seseo).

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Figure 4.12: Seseo.

The method implemented in this project to develop phonemic awareness is based on 23 sounds. In order to teach learners all 23 sounds, a list of 23 words is created. Every word selected must contain one of the 23 targeted sounds in initial position. Likewise, every word must be meaningful to learners and suitable to develop an integrated-based learning lesson in which learners can either practice or acquire knowledge from other subject fields. For instance, during phonemic awareness instruction that was part of a research project from Gil and Méndez (2015), a group of kindergarteners participating in the study learned the sound /b/ through the word *vaca* /baka/ (Spanish word for cow). Learners visited a dairy farm near their school and learned about cows and how milk is produced. Throughout this lesson facilitators asked children to repeat the sound /b/ as often as possible so children would learn that particular sound (Gil & Méndez, 2015) (Figures 4.13, 4.14, & 4.15. See also Appendix A, Slides 71-82). Integration with other subject fields, as previously exemplified with sound /b/, is highly encouraged with all 23 sounds targeted in this step. Likewise, in every lesson to teach a new sound there needs to be an activity that implicitly lets children practice tracing the grapheme(s) that represent a particular sound. The goal is that when children get to step five, grapheme-phoneme correspondence, they can more easily start tracing every letter (grapheme) in the alphabet (See Appendix B for a suggested pacing to develop this step).



Figure 4.13: Picture # 1.



Figure 4.14: Picture # 2.



Figure 4.15: Picture # 3.

Second step: sound combination.

Once children are able to identify and produce all 23 sounds in the first step, the goal in the second step is to teach learners how to combine sounds using colors. First, every vowel sound is assigned a different color (Figures 4.16, 4.17, 4.18, 4.19, & 4.20. See also Appendix A, Slides 88-92).

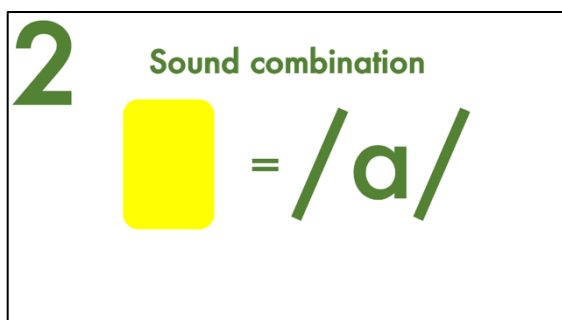


Figure 4.16: Sound /a/.

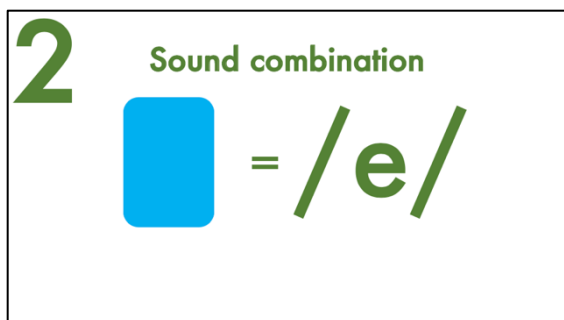


Figure 4.17: Sound /e/.

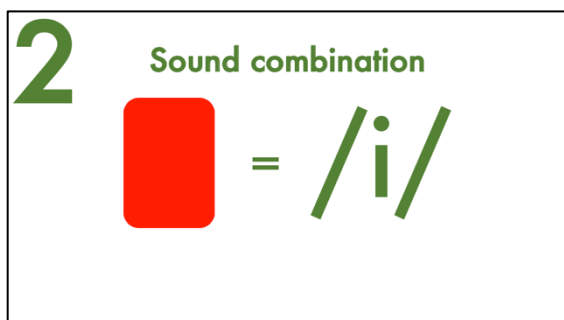


Figure 4.18: Sound /i/.

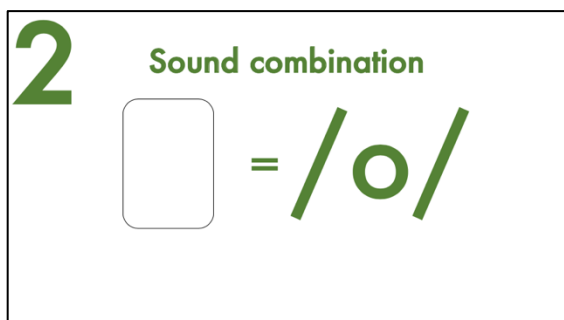


Figure 4.19: Sound /o/.

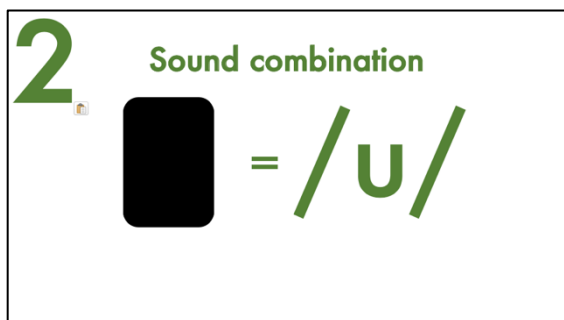


Figure 4.20: Sound /u/.

After children are able to easily associate every vowel sound to its corresponding color, a consonant sound represented with a new color is introduced and combined with every single vowel sound (Figures 4.21, 4.22, 4.23, & 4.24. See also Appendix A, Slides 96-109). At this point, attendees at the workshop are reminded to only talk about sounds and avoid using the word letters.

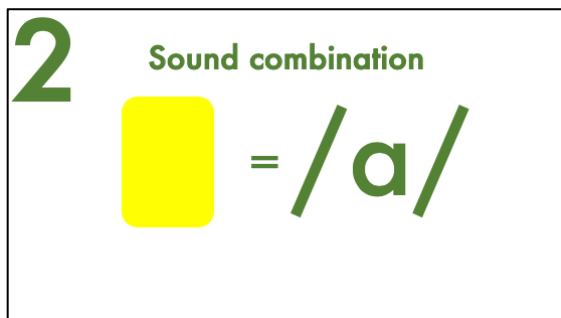


Figure 4.21: Sound /a/.

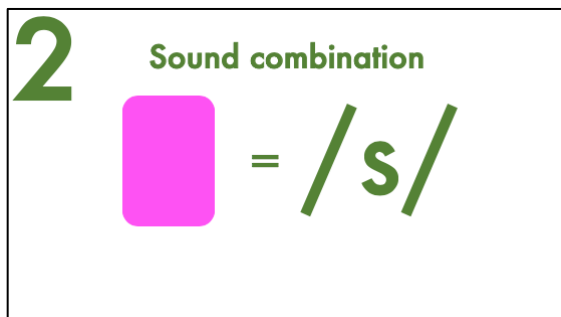


Figure 4.22: Sound /s/.

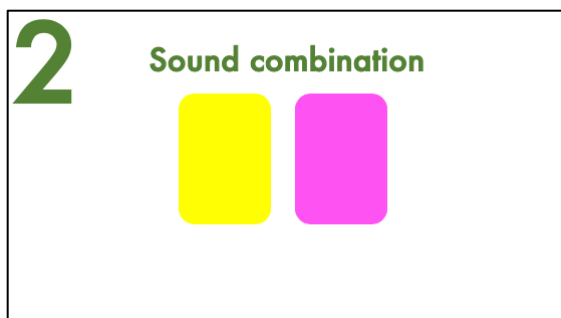


Figure 4.23: Sounds /a/ and /s/.

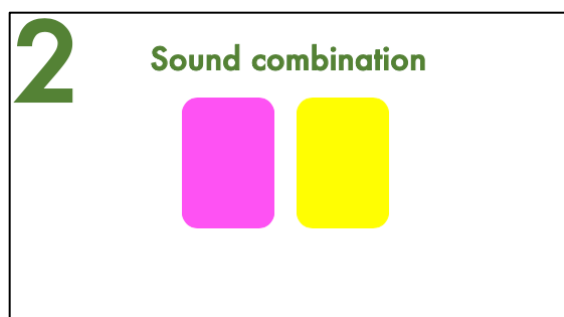


Figure 4.24: Sounds /s/ and /a/

Later, when children are able to combine the first consonant sound with all vowel sounds, the consonant sound is replaced with another one represented with a different color (Figures 4.25, 4.26, 4.27, & 4.28. See also Appendix A, Slides 96-109). The new consonant sound is combined with every vowel sound. The same process is repeated with every new consonant sound.

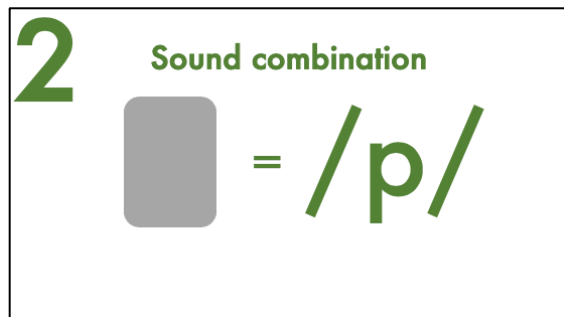


Figure 4.25: Sound /p/.

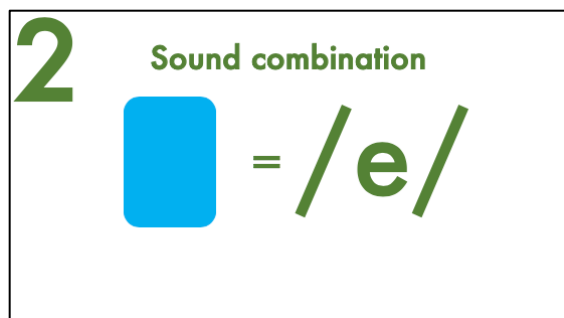


Figure 4.26: Sound /e/.

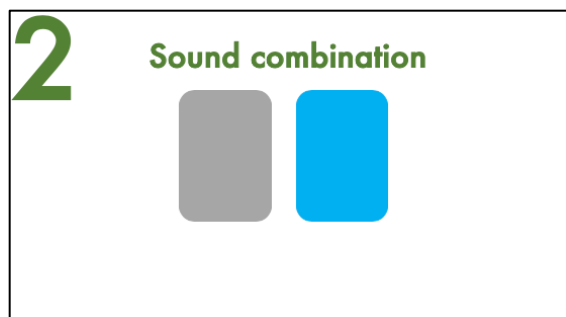


Figure 4.27: Sounds /p/ and /e/.

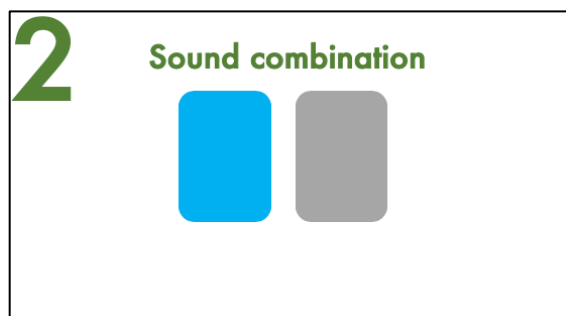


Figure 4.28: Sounds /e/ and /p/.

Continuing with the second step, combinations of sounds are gradually increased in number of sounds and patterns of combination. First, children will practice two-sound combinations consisting of a consonant sound and a vowel sound swapping positions. Next, children will add another sound and will practice all possible combinations. The ultimate goal is for children to create combinations with the highest number of sounds and patterns as possible. (See Appendix B for a suggested pacing to develop this step).

Third step: combination of syllables.

This step also requires colors to combine sounds, but now the goal is to combine syllables. First, children will make combinations of two syllables, swapping their positions. Later, children will add as many syllables as possible. In this step, children will also practice

adding and deleting individual sounds to the combinations (Figures 4.29, 4.30, & 4.31. See also Appendix A, Slides 174-213).

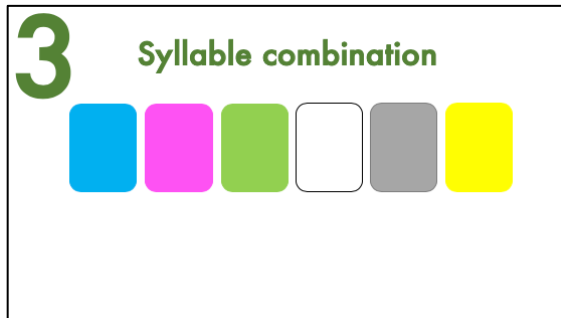


Figure 4.29: Sounds /e/, /s/, /t/, /o/, /p/, and /a/.

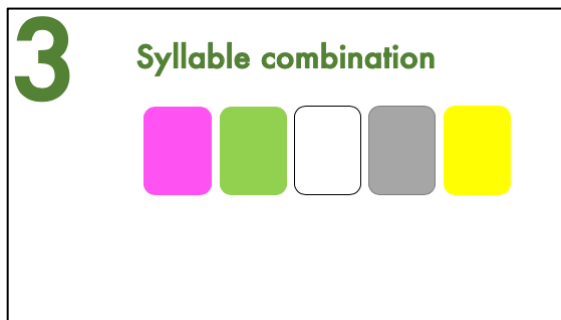


Figure 4.30: Sounds /s/, /t/, /o/, /p/, and /a/.

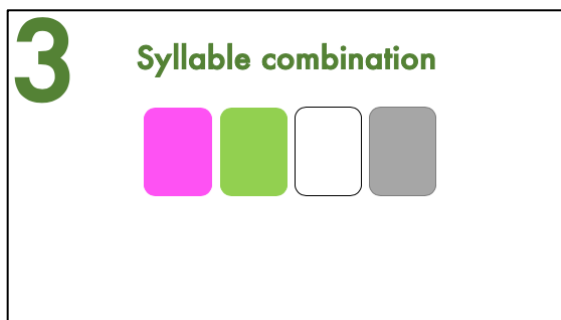


Figure 4.31: Sounds /s/, /t/, /o/, and /p/.

Fourth step: logic.

The goal in this step is to make sure children understand that changing the order of sounds will always result in a new combination. To confirm the objective of this step, children

pronounce a three-sound combination from left to right (Figures 4.32 & 4.33. See also Appendix A, Slides 218-219). Next, the first and last colored cards are swapped, and children pronounce the combination once again. After this and to conclude this step, children answer the following questions:

- Do the two combinations sound the same?
- Are we adding or omitting sounds?
- Why do the two combinations sound differently?

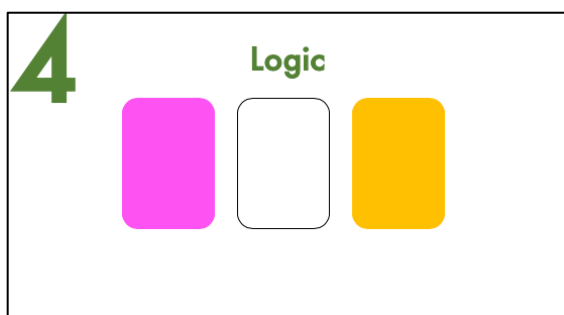


Figure 4.32: Sounds /s/, /o/, and /f/.

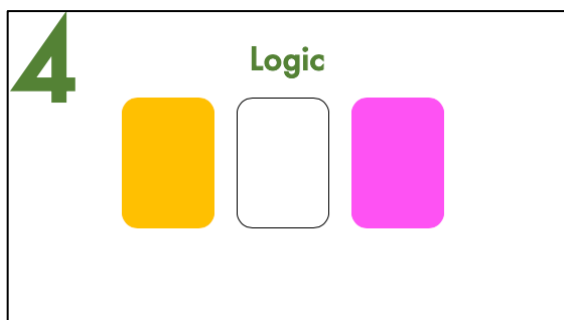


Figure 4.33: Sounds /f/, /o/, and /s/.

Fifth step: phoneme-grapheme correspondence.

In this last step, the goal is to teach children that every sound (phoneme) has one or multiple graphic representations (grapheme). Children also understand the difference between sound and name of the letter (Figures 4.34 & 4.35. See also Appendix A, Slides 227-237).

Furthermore, children's fine motor skills to trace every letter in the alphabet have been exercised since the first step, initial sound identification. (See Appendix B for a suggested pacing to develop this step).

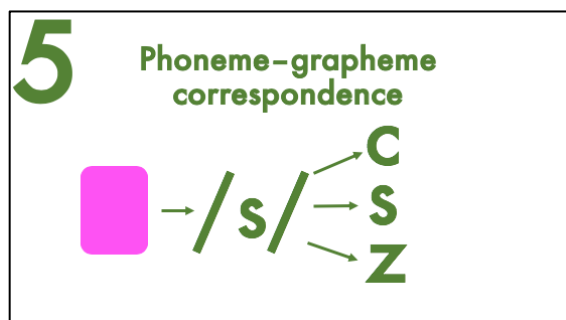


Figure 4.34: Sound /s/ and its corresponding graphemes.

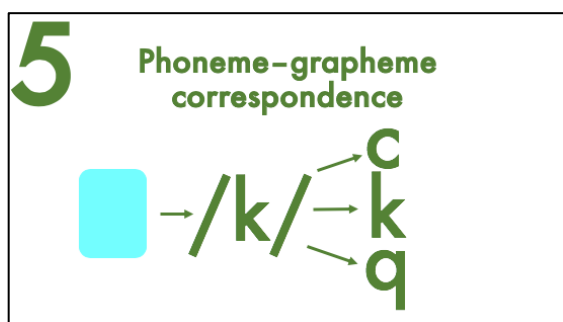


Figure 4.35: Sound /k/ and its corresponding graphemes.

At the end of this five-step procedure, two final remarks are shared with attendees at the workshop. First, once children have successfully completed the five steps previously described, they will be able to start practicing their reading and writing skills in Spanish. Second, since children are already familiar with the individual sounds in their first language, they will be presumably able to pronounce English words more easily. This assumption, once again, is based on the idea that children will be able to use their knowledge of consonant sounds in Spanish to pronounce English words containing consonant sounds that children already know in Spanish but

are arranged in patterns that are rare or non-existent in the L1. After this, the workshop will move on to the third stage.

Third stage: Developing Literate Spanish Speakers' Phonemic Awareness in their L1

The objective of this stage is to show attendees at the workshop how to develop Spanish phonemic awareness in ELLs who already know how to read and write in their first language. This stage is developed through a four-step procedure: sound combination, syllable combination, logic, and phoneme-grapheme correspondence. These four steps aim at the same objectives as the steps in the previous stage; however, there are some changes due to the fact learners are already literate in Spanish but are not fully aware of how each individual phoneme in their first language sounds.

First step: sound combination.

In this first step, the objective is to show attendees at the workshop how to teach learners every phoneme in Spanish as well as how to make combinations of sounds using colors. This stage starts with the presumption learners are fully aware of how vowels sound in Spanish. Accordingly, the focus is on consonant sounds, which is the portion of knowledge learners will be able to transfer into the L2 to facilitate English pronunciation. Therefore, different from the previous stage where vowels were also represented with colors, in this stage, only consonant sounds will be represented with colors (Figures 4.36 & 4.37. See also Appendix A, Slides 247-255). ELLs will learn every consonant sound in Spanish and combine it with all vowels. Combinations will gradually increase in number of sounds and level of difficulty (Figures 4.38, 4.39, & 4.40. See also Appendix A, Slides 257-265). In this stage, learners need to practice

combinations of sounds that are common in English, but rare or nonexistent in Spanish. Once learners are able to create combinations of multiple consonant sounds and vowels, they will move on to the second step.

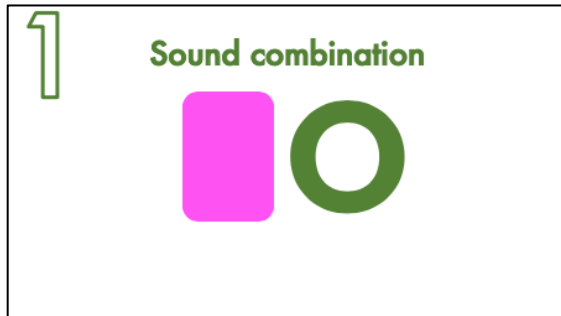


Figure 4.36: Combination of the sound /s/ and the vowel o.

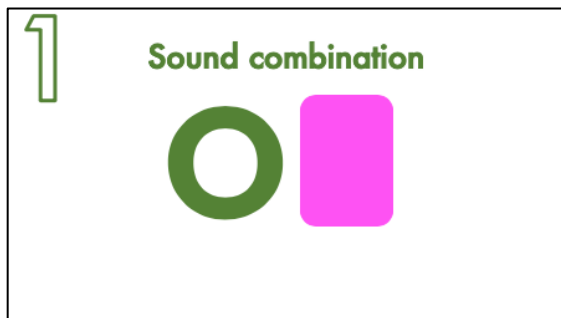


Figure 4.37: Combination of the vowel o and the sound /s/.

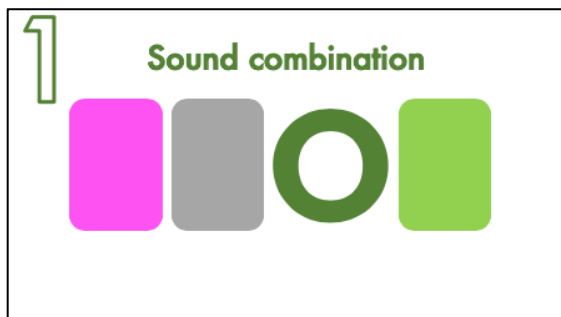


Figure 4.38: Combination of sounds and a vowel /s/, /p/, o, and /t/.

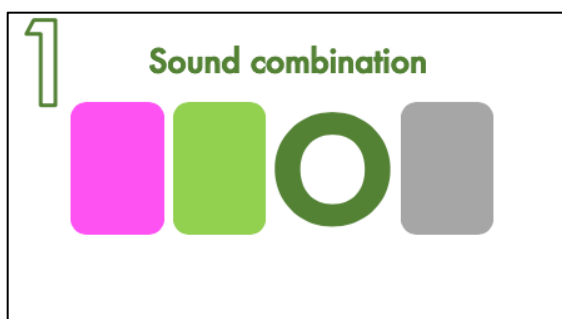


Figure 4.39: Combination of sounds and a vowel /s/, /t/, o, and /p/.

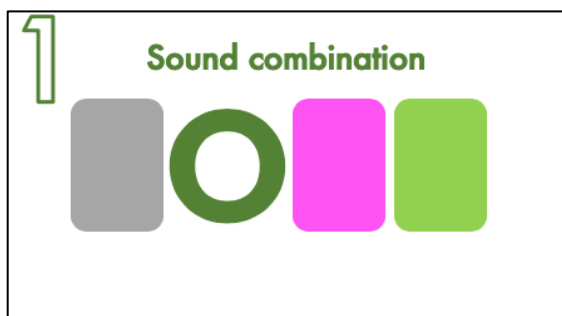


Figure 4.40: Combination of sounds and a vowel /p/, o, /s/, and /t/.

Second step: syllable combination.

The objective in this step is to combine syllables using vowels and colors for consonant sounds. Learners will also practice adding and omitting sounds to consolidate the articulation of consonant sounds in patterns of arrangement and positions that are rare or non-existent in Spanish, but common in English (Figures 4.41, 4.42, 4.43, 4.44, & 4.45. See also Appendix A, Slides 266-291).



Figure 4.41: Combination of sounds and vowels /t/, o, /p/, a, e, and /t/.



Figure 4.42: Combination of sounds and vowels /p/, a, e /s/, /t/, and o.

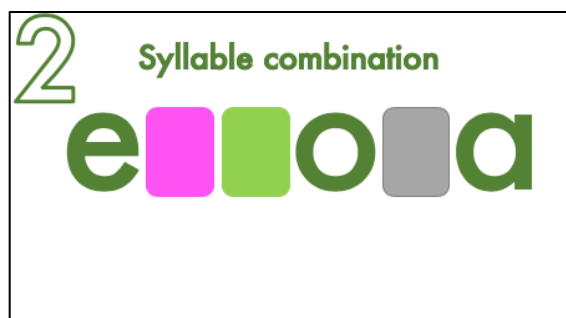


Figure 4.43: Combination of sounds and vowels e, /s/, /t/, o, /p/, and a.

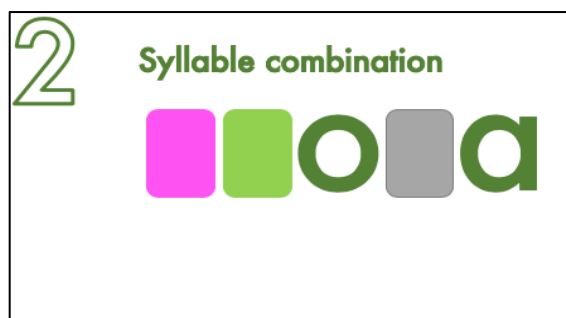


Figure 4.44: Combination of sounds and vowels /s/, /t/, o, /p/, and a.

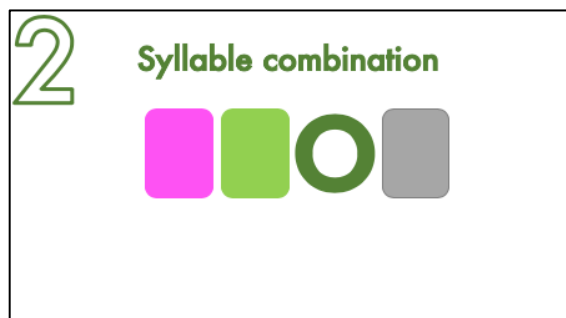


Figure 4.45: Combination of sounds and vowels /s/, /t/, o, and /p/.

Third step: logic.

The goal in this step is to make sure learners understand that changing the order of sounds will always result in a new combination. To confirm the objective of this step, learners pronounce a three-sound combination from left to right. Next, the first and last colored cards are swapped, and learners pronounce the combination once again (Figures 4.46 & 4.47. See also Appendix A, Slides 292-296). After this and to conclude this step, learners answer the following questions:

- Do the two combinations sound the same?
- Are we adding or omitting sounds?
- Why do the two combinations sound differently?

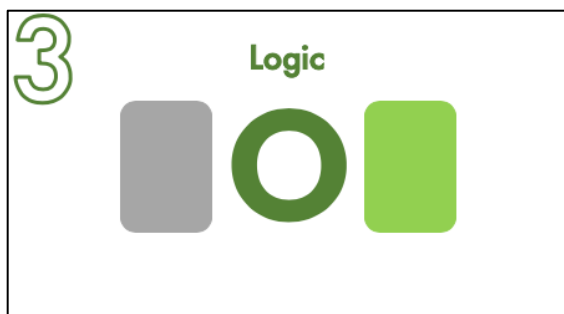


Figure 4.46: Combination of sounds and vowels /p/, o, and /t/.

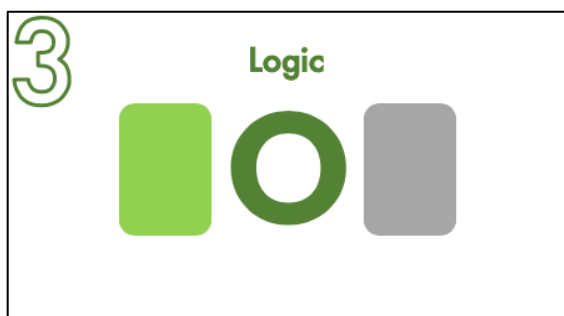


Figure 4.47: Combination of sounds and vowels /t/, o, and /p/.

Fourth step: phoneme-grapheme correspondence.

In this last step, the goal is to teach learners that every sound (phoneme) has one or multiple graphic representations (grapheme). Learners also understand the difference between sound and name of the letter (Figures 4.48 & 4.49. See also Appendix A, Slides 297-301).

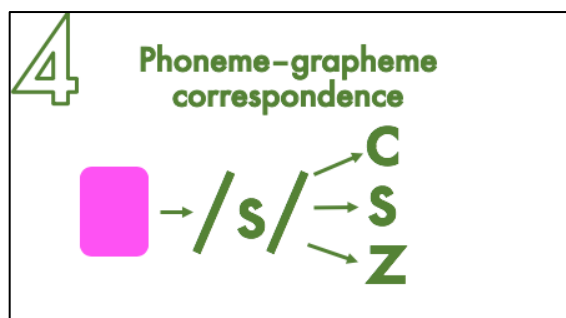


Figure 4.48: Sound /s/ and its corresponding graphemes.

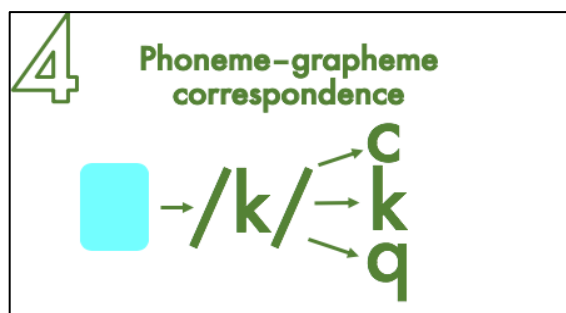


Figure 4.49: Sound /s/ and its corresponding graphemes.

After learners complete this last step, they will be able to use their knowledge on consonant sounds in Spanish to learn how to pronounce words in English such as snake, long, stop, salt, and many more that contain uncommon combinations of sounds in Spanish but are very common in English.

Fourth Stage: Other Resources and Time to Create and Share

The objective of this last stage of the workshop is to share and brainstorm possible resources and activities that could be implemented. Colors are a fundamental component of the two procedures to develop phonemic awareness in both illiterate and literate Spanish speakers. Therefore, attendees to the workshop are invited to consider varying the source of colors to make combinations of sounds. Colored pencils, paint, real objects, colored shirts, and colored shapes are some resources to be considered for making combinations of sounds. After these choices are shared, attendees at the workshop are then given five minutes to get in pairs or small groups to brainstorm possible activities and additional resources that could be done in the classroom to offer learners different choices to practice combining sounds in Spanish. After five minutes, groups are encouraged to share their ideas with the rest of attendees. Finally, to conclude the workshop, there will be a short session of questions and comments.

Chapter Five: Conclusions

I reached several conclusions after completing this thesis project. Those considerations range from a general reflection about teaching to specific views on language instruction. Following, I share five conclusions I collected at the end of this project.

Moving from Professional to Personal Knowledge

By creating this thesis project, I reasserted the idea that at some point during their professional practice teachers create their own funds of knowledge on language instruction. I would like to think that through this project I have made my own personal contribution to the intricate realm of language teaching and learning. In this thesis project, I was able to structure some of my own beliefs about language instruction into explicit knowledge that can be shared and accessed by other fellow language teachers. I have shared part of what Kumaravadivelu (2012) defined as a teacher's personal knowledge, "the individual teacher's sense of plausibility, a sense of what works and what doesn't" (p. 34), and in my opinion, second or foreign language instruction works better when both teachers and learners are able to find connections between the L1 and the L2.

Connecting the Dots between the L1 and the L2

"Memory is the cognitive process of first resort" (Willingham, 2009, p. 37). This quote highly resonated with me before and during the creation of this thesis project. That statement encapsulates the guiding principle in this project and substantiates the relevance and applicability

of this thesis into English language instruction to Spanish-speaking learners. As an undergraduate student, I used to believe Spanish as the L1 played little or no role in English learning as the L2. The idea to use learners' first language to leverage second language learning was not encouraged by popular literature at that time or my teachers' discourse. However, as other perspectives on language teaching that incorporated learners' L1 surged and gained recognition (Kumaravadivelu, 2003) and also after accumulating years of teaching experience, I strongly believe learners' first language plays a fundamental role in learning an L2. In my opinion, learners should be granted the possibility to use their funds of knowledge in their L1 to better succeed in learning an L2. That is why, I posit in this thesis project that developing Spanish speakers' phonemic awareness in their first language will help ELLs learn English pronunciation. When Spanish speakers who have developed their phonemic awareness in their first language start learning English, they will be able to retrieve the phonetic knowledge in Spanish stored in their memory to facilitate the learning of English pronunciation. Following that reasoning, I encourage language teachers to explore all possible ways in which learners could use their first language to learn a second or foreign language, either by comparison or contrast between the two languages.

Taking Advantage of Similarities between Spanish and English

Aspects such as word formation and grammar are remarkably different between Spanish and English. Accordingly, Spanish-speaking learners of English face a variety of challenges throughout their learning experience of the L2. Moreover, even though English and Spanish both share the same alphabet and many cognates, pronunciation is significantly different between these two languages. However, many of the differences between English and Spanish regarding

pronunciation are at the vowel level. A, E, I, O, and U make at least 14 different sounds in English (Meyer, 2009), and only five sounds in Spanish. Conversely, consonants sound the same in both languages in many cases (Raynolds, López-velásquez, & Olivo Valentín, 2017).

Therefore, English language teachers of Spanish-speaking learners could focus on this phonetic similarity between English and Spanish to leverage the learning of pronunciation in the L2. I hope this thesis project will help English language teachers identify and take advantage, when possible, of the similarities between their learners' first language and English. That way, teachers will hopefully facilitate their ELLs' learning of English by adjusting their teaching practices to better use the similarities and differences between languages.

Integrating Phonemic Awareness Instruction in the Classroom

The workshop in this thesis project details two different methods to develop phonemic awareness in Spanish. The choice of method depends on whether learners are literate or illiterate in Spanish as their first language. On the one hand, the method for illiterate Spanish-speaking children is expected to be implemented in lieu of other methods used to develop children's literacy skills in Spanish that do not result in learners being able to identify and produce every single sound in their first language. There is evidence that shows how the phonemic awareness method in this thesis project leads to faster and broader benefits in literacy development in Spanish as the L1 (Gil & Méndez, 2015; Méndez & Díaz, 2007). Likewise, as stated in this thesis project, using the phonemic awareness method will eventually facilitate Spanish-speaking ELLs' learning of English pronunciation. Therefore, I hope language teachers of illiterate Spanish-speaking children will consider implementing the method in this project to help their learners develop their literacy skills in Spanish and subsequently facilitate the learning of

English pronunciation as well. On the other hand, the second method detailed in the workshop, which is for ELLs who are already literate in Spanish, should be implemented early on in the curriculum. Indeed, it should be incorporated as early as possible in the learning process so that learners can transfer their knowledge of consonant sounds in Spanish to learn how to pronounce new vocabulary in English more easily. That way, learners will find it presumably simpler to pronounce words in English containing consonant sounds learners already know how to pronounce in isolation that are arranged in rare or nonexistent patterns in Spanish, but very common in English.

Exploring Other Possibilities

To complete the list of considerations that I reached at the end of this thesis project, I hope this work will encourage English language teachers to explore other ways in which learners' first language could be used to help learners succeed in mastering English as a second or foreign language. For instance, teachers could explore ways to transfer phonemic awareness from other languages different from Spanish into the learning of English pronunciation. Moreover, English language teachers of Spanish-speaking learners could also study other ways, different from the ones in this thesis project, to develop their learner's phonemic awareness in their first language as well as how to use that knowledge to learn English pronunciation. Last but not least, teachers considering the methods, strategies, and resources to develop and practice phonemic awareness in this thesis project could also search for ways to adapt and improve them. Ultimately, the invitation is for teachers to explore new and different possibilities to help learners connect the dots between the L1 and the L2 as well as for teachers to contribute their own personal knowledge in order to continue improving the always evolving art of language teaching.

Appendices

**Phonemic awareness
transfer from Spanish to
English:
A way to approach
English pronunciation**

Jhon Jairo Méndez Rojas

Slide # 1

Goals

- To learn what phonemic awareness is and its role in language learning.
- To learn how to develop illiterate Spanish-speaking children's phonemic awareness in their first language.

Slide # 2

Goals

- To learn how to develop literate Spanish speakers' phonemic awareness in their first language.
- To share ideas on how to develop/practice Spanish phonemic awareness.

Slide # 3

Have you ever noticed novice Spanish-speaking learners of English struggling to pronounce the following words?

Slide # 4

snake
name
long
stop
like
need
salt
verb

Slide # 5

Do you think it is possible learners
struggle with English pronunciation
because they are not even aware of
the individual sounds that they use in
their first language?

Slide # 6

Phonemic awareness is the understanding that oral language consists of a series of individual sounds or phonemes, which are the smallest units of sound that make a difference in communication (Yopp & Yopp, 2000).

Slide # 7

/dog/



/hog/



Slide # 8

Phonemic awareness and first language learning

Scholarship shows that phonemic awareness facilitates literacy development in the L1.

- Reading (decoding and fluency)
- Writing (encoding and spelling)

Slide # 9

- Ashby, J., Dix, H., Bontrager, M., Dey, R., & Archer, A. (2013). Phonemic awareness contributes to text reading fluency: Evidence from eye movements. *School Psychology Review*, 42(2), 157-170. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/1415379571?accountid=11207>
- Corinne, R. S. (1998). From gibberish to phonemic awareness: Effective decoding instruction. *Teaching Exceptional Children*, 30(6), 20. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/201162513?accountid=11207>
- Frost, J. (2001). Phonemic awareness, spontaneous writing, and reading and spelling development from a preventive perspective. *Reading and Writing*, 14(5-6), 487-513. doi:2119/10.1023/A:1011143002068
- Griffith, P. & Olson, M. (1992). Phonemic awareness helps beginning readers break the code. *The Reading Teacher*, 45(7), 516. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203269843?accountid=11207>
- Kamii, C., & Manning, M. (2002). Phonemic awareness and beginning reading and writing. *Journal of Research in Childhood Education*, 17(1), 38-46. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203879590?accountid=11207>

Slide # 10

- Kenner, B. B., Terry, N. P., Friehling, A. H., & Namy, L. L. (2017). Phonemic awareness development in 2.5- and 3.5-year-old children: An examination of emergent, receptive, knowledge and skills. *Reading and Writing*, 30(7), 1575-1594. doi:10.1007/s11145-017-9738-0
- Loeb, D. F., Gillam, R. B., Hoffman, L., Brandel, J., & Marquis, J. (2009). The effects of fast ForWord language on the phonemic awareness and reading skills of school-age children with language impairments and poor reading skills. *American Journal of Speech - Language Pathology*, 18(4), 376-87. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/204294700?accountid=11207>
- Lombardino, L. J., Bedford, T., Fortier, C., Carter, J., & Brandi, J. (1997). Invented spelling: Developmental patterns in kindergarten children and guidelines for early literacy intervention. *Language, Speech & Hearing Services in Schools*, 28(4), 333. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/232585077?accountid=11207>
- Miller, P. (2007). The role of phonology in the word decoding skills of poor readers: Evidence from individuals with prelingual deafness or diagnosed dyslexia. *Journal of Developmental and Physical Disabilities*, 19(4), 385-408. doi:10.1007/s10882-007-9057-5

Slide # 11

- Muter, V., & Snowling, M. (1998). Concurrent and longitudinal predictors of reading: The role of metalinguistic and short-term memory skills. *Reading Research Quarterly*, 33(3), 320. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/212119654?accountid=11207>
- Orton, J. G. (2000). Phonemic awareness and inventive writing. *New England Reading Association Journal*, 36(1), 17. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/206040142?accountid=11207>
- Snider, V. E. (1997). The relationship between phonemic awareness and later reading achievement. *The Journal of Educational Research*, 90(4), 203. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/204193455?accountid=11207>
- Wasik, B. A. (2001). Phonemic awareness and young children. *Childhood Education*, 77(3), 128-133. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/210382452?accountid=11207>

Slide # 12

Phonemic awareness and second language learning

Scholarship also shows that phonemic awareness facilitates literacy development in the L2.

- Reading (decoding and fluency)
- Writing (encoding and spelling)

Slide # 13

- Atwill, K., Blanchard, J., Gorin, J. S., & Burstein, K. (2007). Receptive vocabulary and cross-language transfer of phonemic awareness in kindergarten children. *The Journal of Educational Research*, 100(6), 336-345,384. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/204199454?accountid=11207>
- Ijalba, E., & Obler, L. K. (2015). First language grapheme-phoneme transparency effects in adult second-language learning. *Reading in a Foreign Language*, 27(1), 47-70. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/1705665694?accountid=11207>
- Janssen, C., Segers, E., McQueen, J. M., & Verhoeven, L. (2017). Transfer from implicit to explicit phonological abilities in first and second language learners. *Bilingualism*, 20(4), 795-812. doi:10.1017/S1366728916000523
- Jill, M. L., & Michael, M. G. (2005). Crossover of phonological processing skills: A study of Spanish-speaking students in two instructional settings. *Remedial and Special Education*, 26(4), 226-235. doi:10.1177/07419325050260040501
- Sparks, R. L., Patton, J., Ganschow, L., Humbach, N., & Javorsky, J. (2006). Native language predictors of foreign language proficiency and foreign language aptitude. *Annals of Dyslexia*, 56(1), 129-60. doi:2067/10.1007/s11881-006-0006-2

Slide # 14

- Speciale, G., Ellis, N. C., & Bywater, T. (2004). Phonological sequence learning and short-term store capacity determine second language vocabulary acquisition. *Applied Psycholinguistics*, 25(2), 293. doi:10.1017/S0142716404001146
- Sun-alperin, M., & Wang, M. (2011). Cross-language transfer of phonological and orthographic processing skills from Spanish L1 to English L2. *Reading and Writing*, 24(5), 591-614. doi:2067/10.1007/s11145-009-9221-7
- Wise, N., D'Angelo, N., & Chen, X. (2016). A school-based phonological awareness intervention for struggling readers in early French immersion. *Reading and Writing*, 29(2), 183-205. doi:10.1007/s11145-015-9585-9
- Yopp, H. K., & Stapleton, L. (2008) Conciencia fonémica en Español (Phonemic awareness in Spanish). *The Reading Teacher*, 61(5), 374–382. doi:10.1598/RT.61.5.2

Slide # 15

Phonemic awareness has shown positive effects on first and second language learning, more specifically in literacy development.

Slide # 16

The leading assumption in this project

Developing phonemic awareness in Spanish as the L1 will facilitate the learning of English pronunciation as the L2.

Slide # 17

English & Spanish

Differences

- Word formation
- Grammar
- Vowel sound pronunciation

Similarities

- Alphabet
- Cognates
- Consonant sound pronunciation

Slide # 18

English & Spanish

Consonant sound pronunciation

b, c, d, f, g, k, l, m, n, p, q, s, t, and x
sound the same in many cases in both
languages.

Slide # 19

English & Spanish

Consonant sound pronunciation

b

boat

bote

Slide # 20

English & Spanish

Consonant sound pronunciation

c

castle

castillo

Slide # 21

English & Spanish

Consonant sound pronunciation

d

day

día

Slide # 22

English & Spanish

Consonant sound pronunciation

f

flower

flor

Slide # 23

English & Spanish

Consonant sound pronunciation

g

gallery

galería

Slide # 24

English & Spanish

Consonant sound pronunciation

k

kilogram

kilogramo

Slide # 25

English & Spanish

Consonant sound pronunciation

l

language

lenguaje

Slide # 26

English & Spanish

Consonant sound pronunciation

m

magical

mágico

Slide # 27

English & Spanish

Consonant sound pronunciation

n

note

nota

Slide # 28

English & Spanish

Consonant sound pronunciation

p

paper

papel

Slide # 29

English & Spanish

Consonant sound pronunciation

q

equity

equidad

Slide # 30

English & Spanish

Consonant sound pronunciation

s

soup

sopa

Slide # 31

English & Spanish

Consonant sound pronunciation

t

time

tiempo

Slide # 32

English & Spanish

Consonant sound pronunciation

X

explain

explicar

Slide # 33

English & Spanish

Consonant sound pronunciation

The letter r sounds the same in both languages when it is a voiced alveolar tap or flap.

Slide # 34

English & Spanish

Consonant sound pronunciation

r

Caroline

Carolina

Slide # 35

English & Spanish

Consonant sound pronunciation

The combination **ch** in initial position in English sounds the same in Spanish.

Slide # 36

English & Spanish

Consonant sound pronunciation

ch

Chinese

chino

Slide # 37

The scholarship reviewed for this project reflected no evidence of a likely relationship between Spanish phonemic awareness and English pronunciation despite the shared alphabetic and phonological features between these two languages.

Slide # 38

Phonemic awareness and cognitive science

Ideas from cognitive science could certainly support the hypothesis that developing PA in Spanish as the L1 could facilitate pronunciation in English as the L2.

Slide # 39

Background knowledge

“Memory is the cognitive process of first resort”
(Willingham, 2009, p. 37).

Slide # 40

Background knowledge

Developing Spanish-speaking learners' phonemic awareness in their first language will eventually serve as background knowledge when ELLs start learning English pronunciation.

Slide # 41

Background knowledge

The letter **p** sounds the same in many cases both in Spanish and English.

Slide # 42

English & Spanish

Consonant sound pronunciation

paper p papel

Slide # 43

Background knowledge

Once learners can identify and pronounce the sound /p/ in isolation in Spanish, they can use that knowledge to learn how to pronounce words in English.

Slide # 44

English & Spanish

Consonant sound pronunciation

stop p pare

Slide # 45

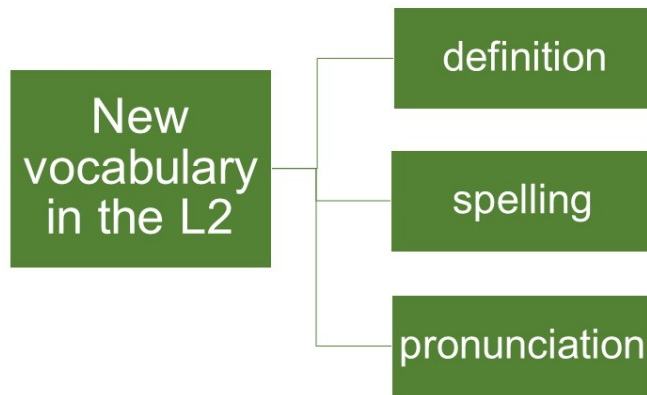
Background knowledge

The same reasoning applies to all the other consonant sounds Spanish and English have in common.

b, c, d, f, g, k, l, m, n, p, q, s, t, and x

Slide # 46

Cognitive load



Slide # 47

Cognitive load

If learners are already familiar with the way consonant letters would sound in isolation, the cognitive load implied in learning new vocabulary in English could be minimized and working memory optimized.

Slide # 48

Working memory

“Working memory is the retention of a small amount of information in a readily accessible form”
(Cowan, 2014, p. 197)

Slide # 49

Working memory

Working memory can operate more easily with new information when it can be chunked
(Willingham, 2009).

Slide # 50

Chunking

“The process of arranging and grouping bits of information into **familiar units** or chunks”
(Xu, 2016, p. 122).

Slide # 51

Chunking

Chunking works more effectively when there is already background information in the long-term memory
(Willingham, 2009).

Slide # 52

When Spanish-speaking ELLs learn new vocabulary in the L2, the cognitive load could be minimized, and the processing of new input could be optimized if learners already have a phonetic background in Spanish to assist in the learning of English pronunciation.

Slide # 53

ELLs could use their Spanish phonemic awareness to learn how to pronounce words in English containing sounds that learners also use in their native language and that they already know how to manipulate in isolation.

Slide # 54

snake
name
long
stop
like
need
salt
verb

Slide # 55

How to develop illiterate
Spanish-speaking children's
phonemic awareness in their
first language

Slide # 56

5 stages

1. Initial sound identification
2. Sound combination
3. Syllable combination
4. Logic
5. Phoneme–grapheme correspondence

Slide # 57

1 Initial sound identification

Objective:

Children can identify and produce every single phoneme in Spanish.

Slide # 58

1 Initial sound identification

There are 27 letters in Spanish:

a, b, c, d, e, f, g, h, i, j, k, l, m, n, ñ, o,
p, q, r, s, t, u, v, w, x, y, z

<https://www.rae.es/consultas/exclusion-de-ch-y-ll-del-abecedario>

Slide # 59

1 Initial sound identification

There are 23 - 25 phonemes in Spanish.

The number of sounds varies according to country.

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Slide # 60

1 Initial sound identification

There are 23-25 phonemes in Spanish:

/a/, /b/, /k/, /ch/, /d/, /e/, /f/, /g/, /i/, /j/, /l/, /ll/, /**ll**/,

/m/, /n/, /ñ/, /o/, /p/, /r/, /rr/, /**s**/, /t/, /u/, /ks/,

/y/, /z/

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Slide # 61

1 Initial sound identification

In most Spanish speaking countries,
/ll/ and /y/
sound the same (yeísmo).

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

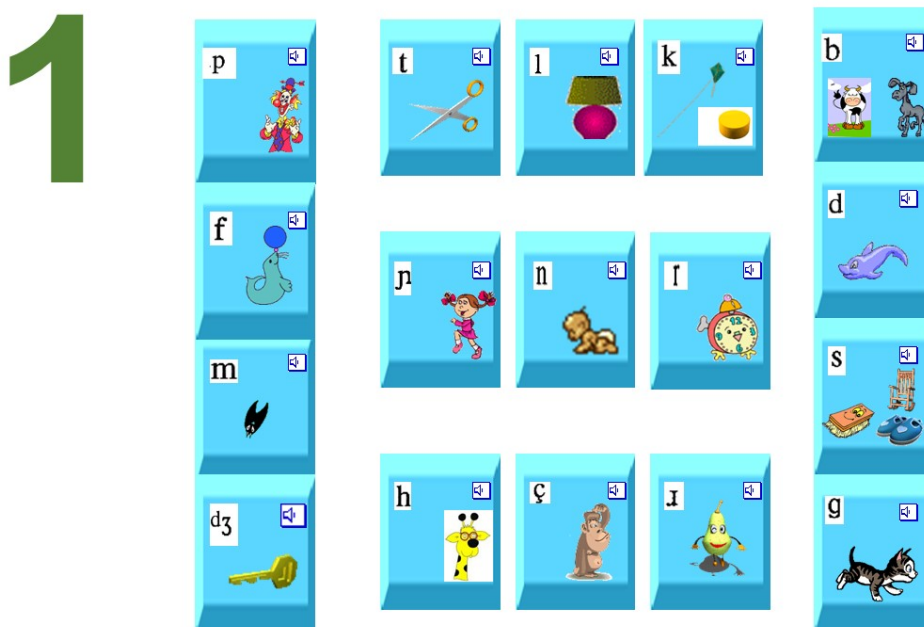
Slide # 62

1 Initial sound identification

In most Spanish speaking countries,
/c + e, i/, /s/, and /z/
sound the same (seseo).

<https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Slide # 63



Slide # 64

1 Initial sound identification

Letter **X** in initial position sounds the same as letter **S** in Spanish.

X sounds the same both in Spanish and English in other positions.

Slide # 65

1 English & Spanish Consonant sound pronunciation

X

explain

explicar

Slide # 66

1 Initial sound identification

Create a list of words that includes all the phonemes in Spanish in initial position.

Slide # 67

1 Initial sound identification

Words must be meaningful to kids.

Slide # 68

1 Initial sound identification

Make sure every word can be used to teach an integrated content-based lesson.

Slide # 69

1 Initial sound identification

Examples:

Slide # 70

1 Initial sound identification

/k/

Slide # 71

1



Slide # 72

1



Slide # 73

1



Slide # 74

1 Initial sound identification

/ch/

Slide # 75

1



Slide # 76

1



Slide # 77

1



Slide # 78

1 Initial sound identification

/b/

Side # 79

1



Slide # 80

1



Slide # 81

1



Slide # 82

1 Initial sound identification

See handout with a suggested pacing to develop this stage.

Slide # 83

1 Initial sound identification

Move on to the second stage once children have practiced identifying and producing every phoneme in Spanish.

Slide # 84

2

Sound combination

Objective:

Children can manipulate individual sounds in different positions.

Slide # 85

2

Sound combination

Use colors to combine sounds.

Slide # 86

2

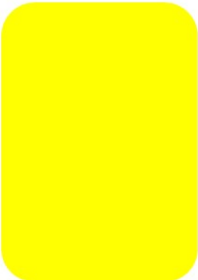
Sound combination

Assign a color to every vowel sound.

Slide # 87

2

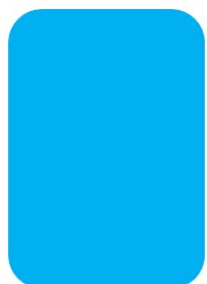
Sound combination

 = /a/

Slide # 88

2

Sound combination

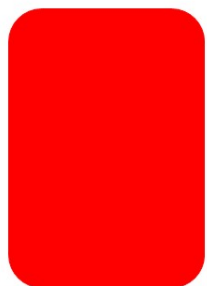


= /e/

Slide # 89

2

Sound combination

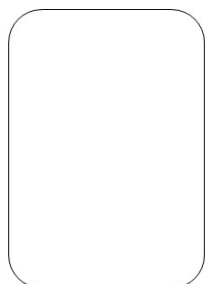


= /i/

Slide # 90

2

Sound combination



= /o/

Slide # 91

2

Sound combination



= /u/

Slide # 92

2

Sound combination

Children associate sounds with colors.
In this stage, we talk about sounds
NOT letters.

Slide # 93

2

Sound combination

Practice the association of color and sound until children can easily identify and produce every vowel sound based on the color.

Slide # 94

2

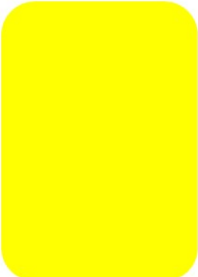
Sound combination

Introduce a consonant sound and combine it with every vowel sound.

Slide # 95

2

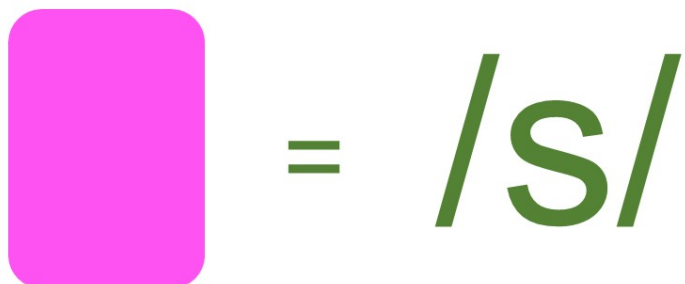
Sound combination

 = /a/

Slide # 96

2

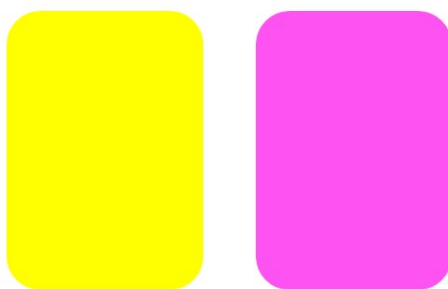
Sound combination



Slide # 97

2

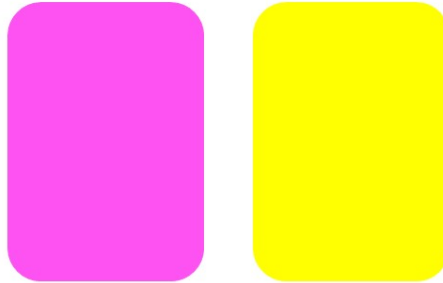
Sound combination



Slide # 98

2

Sound combination



Slide # 99

2

Sound combination

Once children have combined the first consonant sound with every vowel sound, change the consonant sound for a different one.

Slide # 100

2

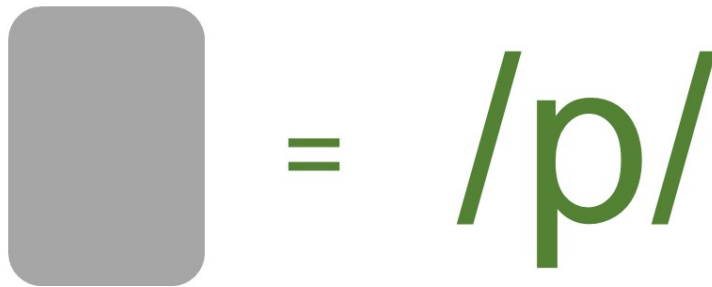
Sound combination

Combine the new consonant sound
with every vowel sound.

Slide # 101

2

Sound combination



Slide # 102

2

Sound combination



= /e/

Slide # 103

2

Sound combination



Slide # 104

2

Sound combination



Slide # 105

2

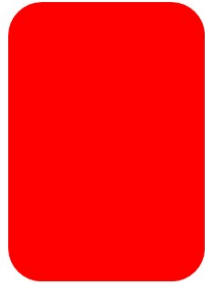
Sound combination



Slide # 106

2

Sound combination



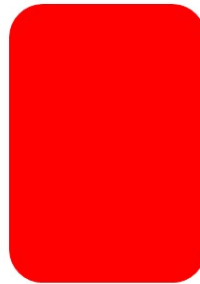
=

/i/

Slide # 107

2

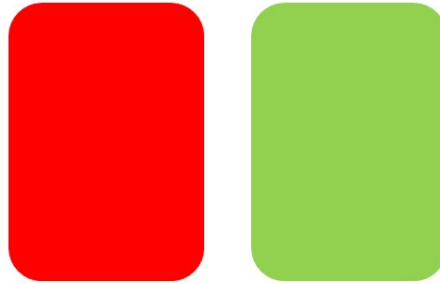
Sound combination



Slide # 108

2

Sound combination



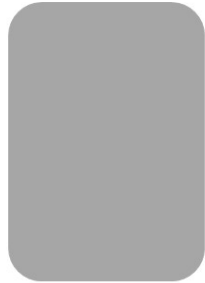
Slide # 109

2

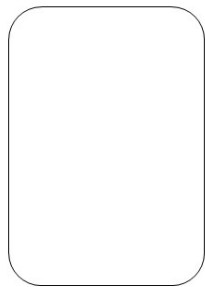
Sound combination

Increase the number of sounds progressively.

Slide # 110

2**Sound combination****= /p/**

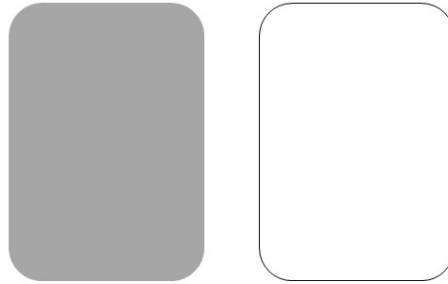
Slide # 111

2**Sound combination****= /o/**

Slide # 112

2

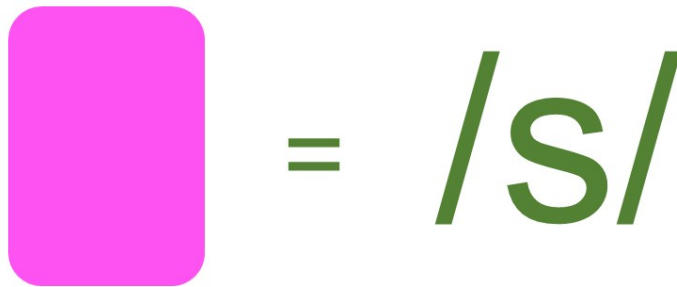
Sound combination



Slide # 113

2

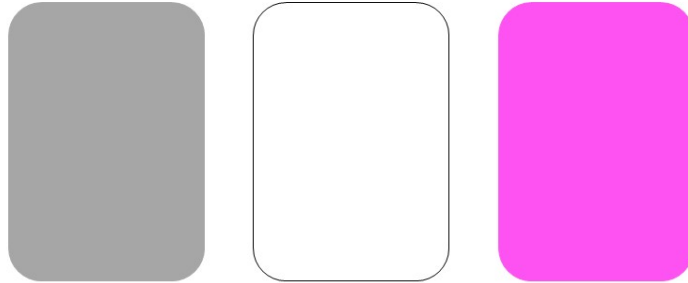
Sound combination



Slide # 114

2

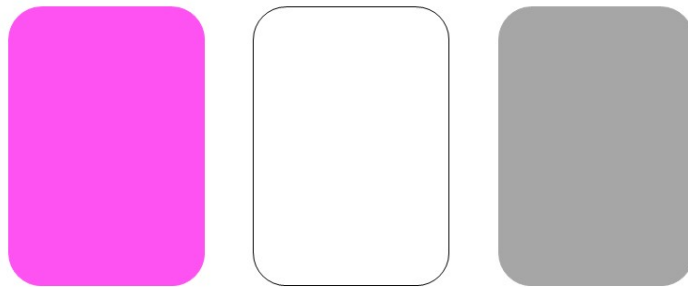
Sound combination



Slide # 115

2

Sound combination



Slide # 116

2

Sound combination



Slide # 117

2

Sound combination

Sequences of sound combination:

a. consonant - vowel

Slide # 118

2

Sound combination

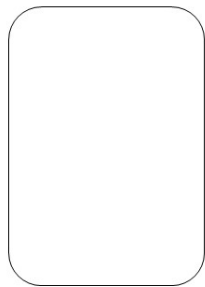


= /p/

Slide # 119

2

Sound combination

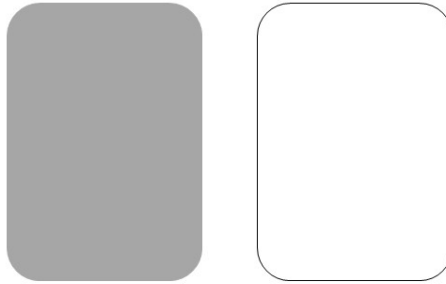


= /o/

Slide # 120

2

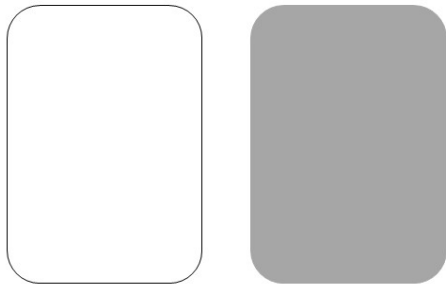
Sound combination



Slide # 121

2

Sound combination



Slide # 122

2

Sound combination

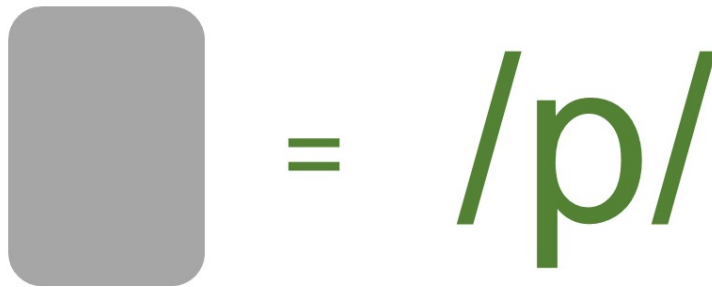
Sequences of sound combination:

- b. consonant – vowel –
consonant

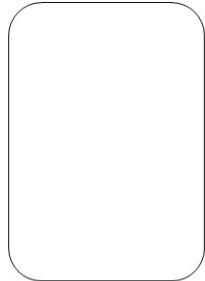
Slide # 123

2

Sound combination



Slide # 124

2**Sound combination****= /o/**

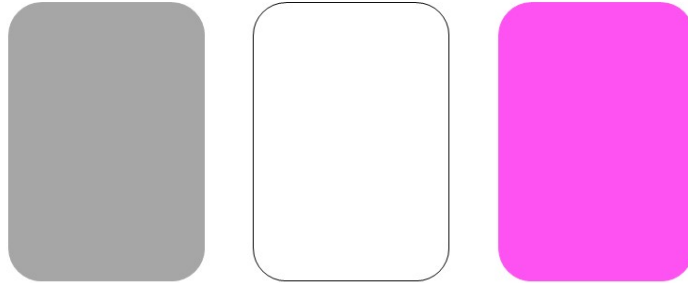
Slide # 125

2**Sound combination****= /s/**

Slide # 126

2

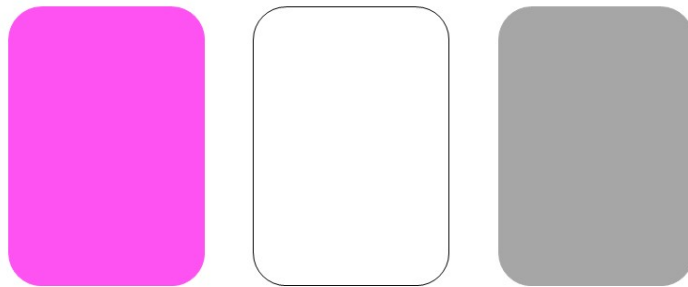
Sound combination



Side # 127

2

Sound combination



Slide # 128

2

Sound combination



Slide # 129

2

Sound combination

Sequences of sound combination:

- c. consonant – vowel –
consonant – vowel

Slide # 130

2

Sound combination

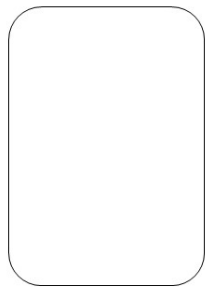


= /p/

Slide # 131

2

Sound combination

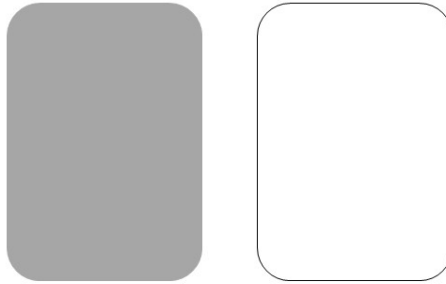


= /o/

Slide # 132

2

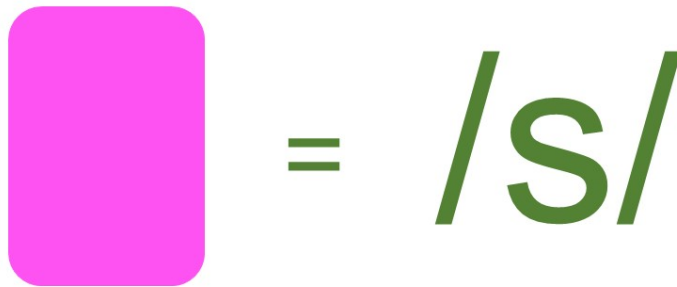
Sound combination



Slide # 133

2

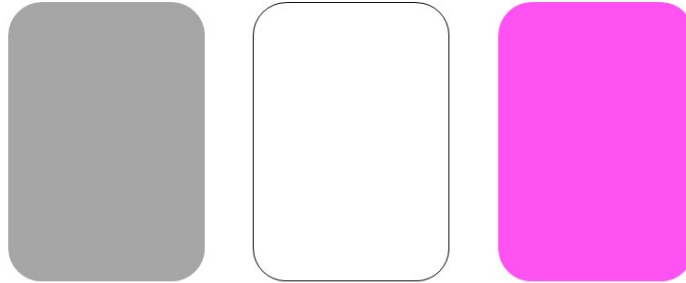
Sound combination



Slide # 134

2

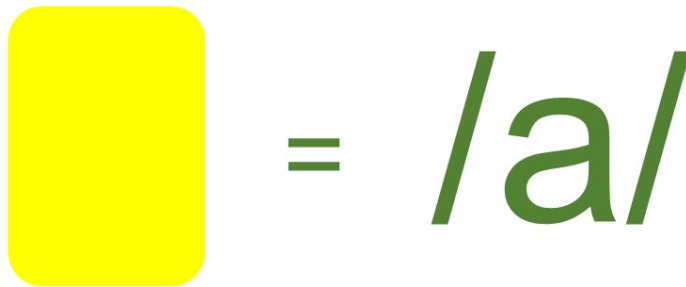
Sound combination



Slide # 135

2

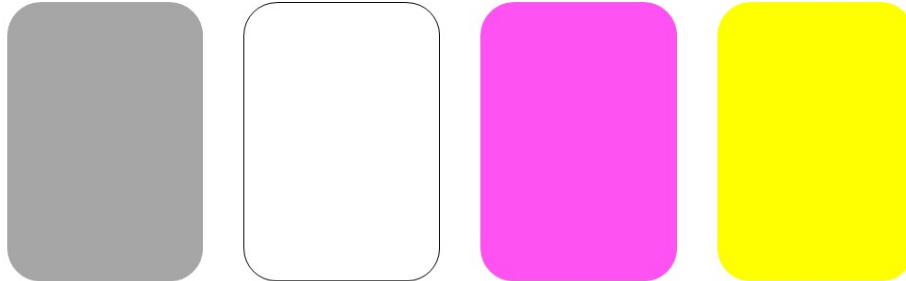
Sound combination



Slide # 136

2

Sound combination



Slide # 137

2

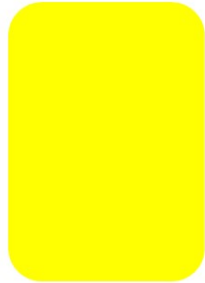
Sound combination



Slide # 138

2

Sound combination



= /a/

Slide # 139

2

Sound combination

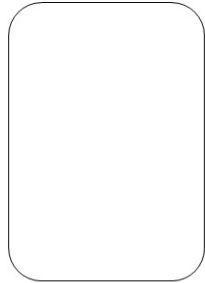


= /p/

Slide # 140

2

Sound combination

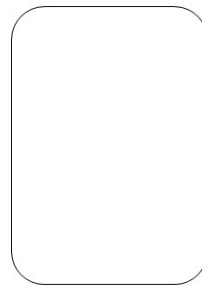


= /o/

Slide # 141

2

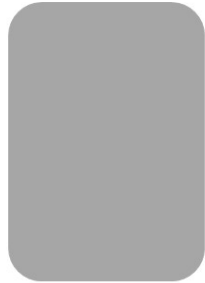
Sound combination



Slide # 142

2

Sound combination

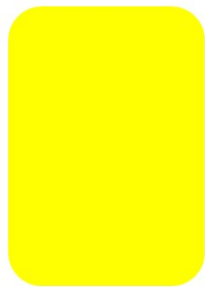


= /p/

Slide # 143

2

Sound combination



= /a/

Slide # 144

2

Sound combination

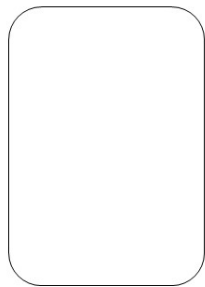


= /s/

Slide # 145

2

Sound combination

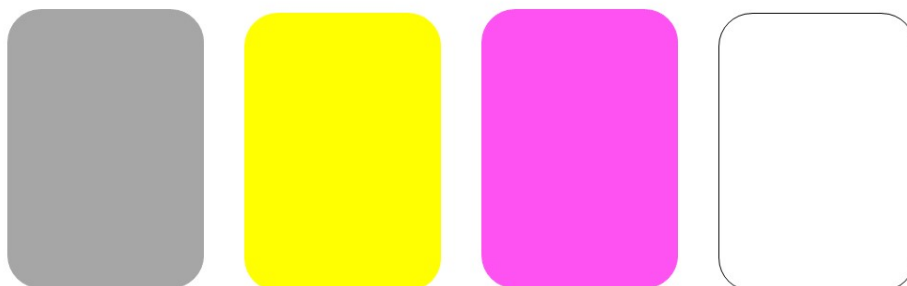


= /o/

Slide # 146

2

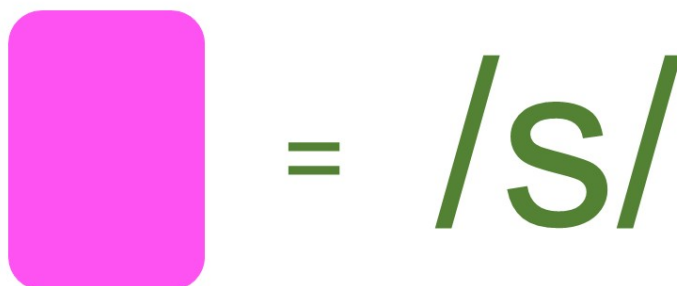
Sound combination



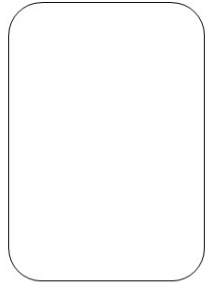
Slide # 147

2

Sound combination



Slide # 148

2**Sound combination****= /o/**

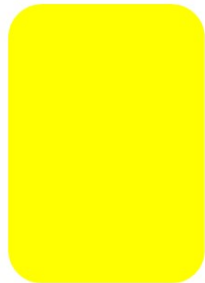
Slide # 149

2**Sound combination****= /p/**

Slide # 150

2

Sound combination



= /a/

Slide # 151

2

Sound combination



Slide # 152

2

Sound combination

Sequences of sound combination:

- d. consonant – consonant –
vowel - consonant

Slide # 153

2

Sound combination



= /s/

Slide # 154

2

Sound combination



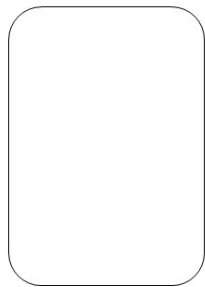
=

/t/

Slide # 155

2

Sound combination



=

/o/

Slide # 156

2

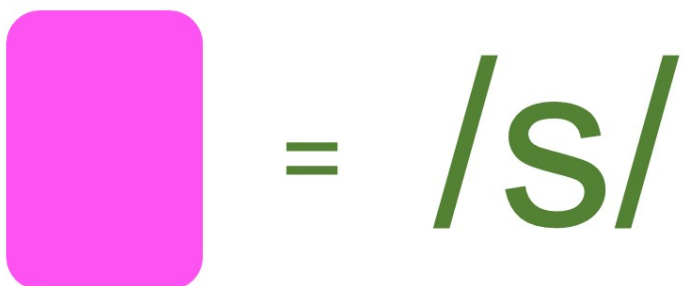
Sound combination



Slide # 157

2

Sound combination



Slide # 158

2

Sound combination



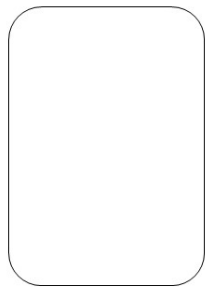
=

/t/

Slide # 159

2

Sound combination



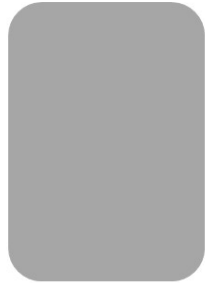
=

/o/

Slide # 160

2

Sound combination



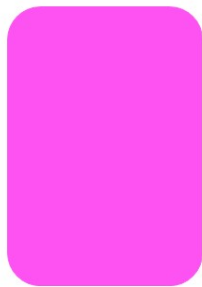
=

/p/

Slide # 161

2

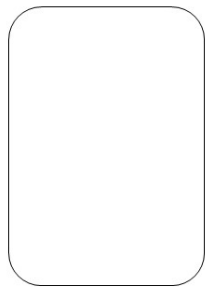
Sound combination



Slide # 162

2**Sound combination****= /p/**

Slide # 163

2**Sound combination****= /o/**

Slide # 164

2

Sound combination



= /s/

Slide # 165

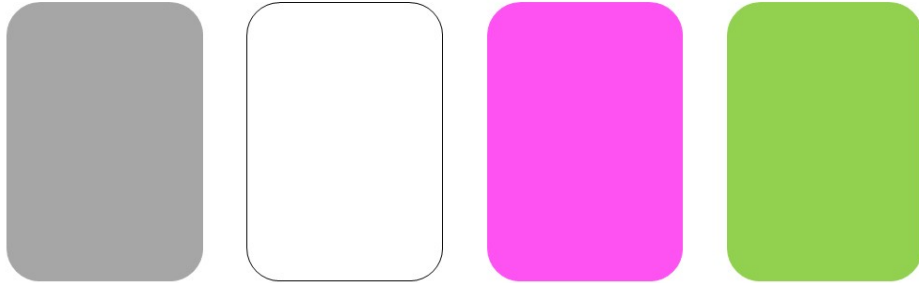
2

Sound combination

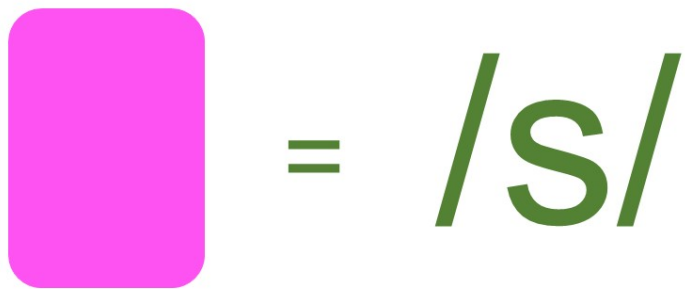


= /t/

Slide # 166

2**Sound combination**

Slide # 167

2**Sound combination**

Slide # 168

2

Sound combination

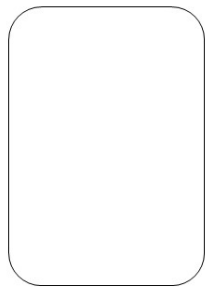


= /p/

Slide # 169

2

Sound combination



= /o/

Slide # 170

2

Sound combination



=

/t/

Slide # 171

2

Sound combination



Slide # 172

2

Sound combination

See handout with a suggested pacing to develop this stage.

Slide # 173

3

Syllable combination

Objective:

Children can manipulate syllables in different positions.

Slide # 174

3

Syllable combination



= /e/

Slide # 175

3

Syllable combination

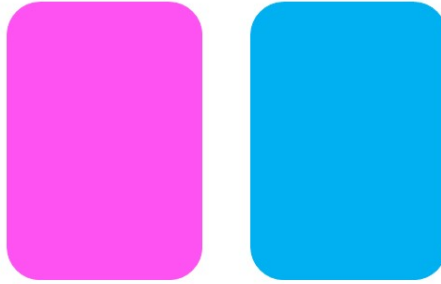


= /s/

Slide # 176

3

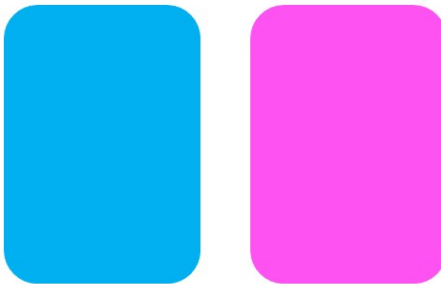
Syllable combination



Slide # 177

3

Syllable combination



Slide # 178

3

Syllable combination



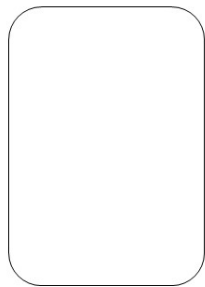
=

/t/

Slide # 179

3

Syllable combination



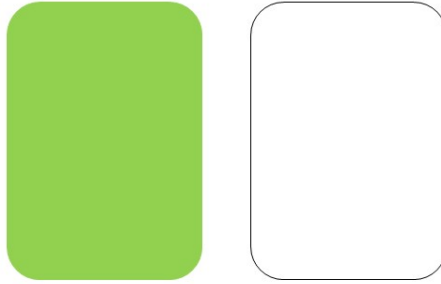
=

/o/

Slide # 180

3

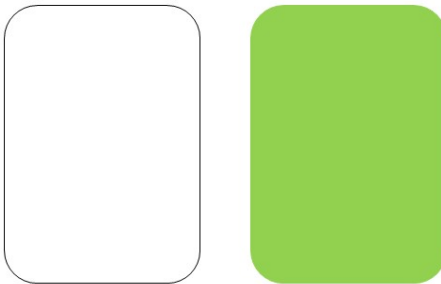
Syllable combination



Slide # 181

3

Syllable combination



Slide # 182

3

Syllable combination



= /e/

Slide # 183

3

Syllable combination



= /s/

Slide # 184

3

Syllable combination



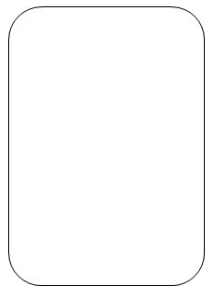
=

/t/

Slide # 185

3

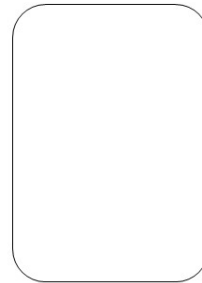
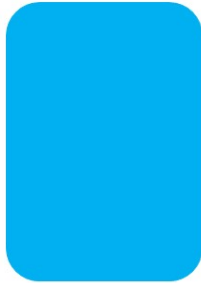
Syllable combination



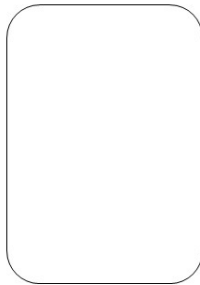
=

/o/

Slide # 186

3**Syllable combination**

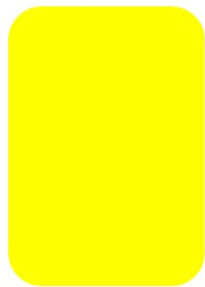
Slide # 187

3**Syllable combination**

Slide # 188

3**Syllable combination****= /p/**

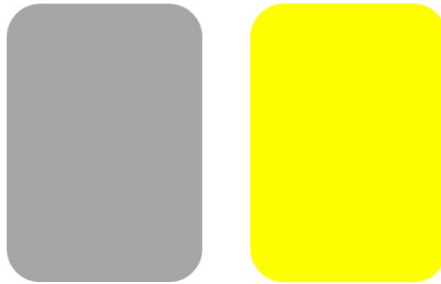
Slide # 189

3**Syllable combination****= /a/**

Slide # 190

3

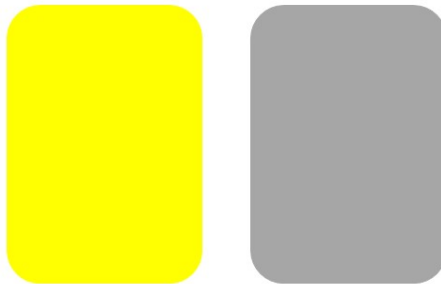
Syllable combination



Slide # 191

3

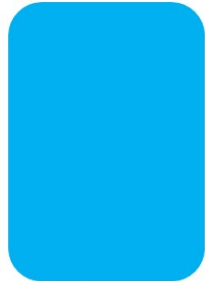
Syllable combination



Slide # 192

3

Syllable combination



= /e/

Slide # 193

3

Syllable combination



= /s/

Slide # 194

3

Syllable combination



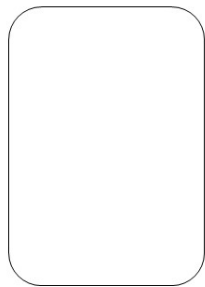
=

/t/

Slide # 195

3

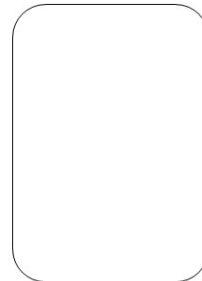
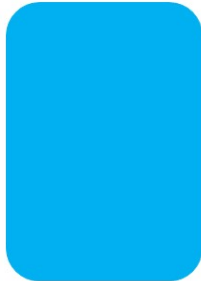
Syllable combination



=

/o/

Slide # 196

3**Syllable combination**

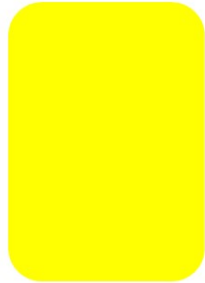
Slide # 197

3**Syllable combination****= /p/**

Slide # 198

3

Syllable combination

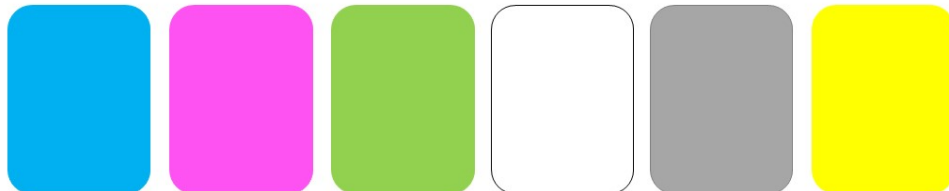


= /a/

Slide # 199

3

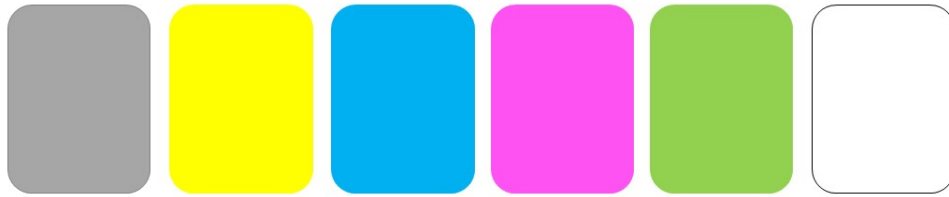
Syllable combination



Slide # 200

3

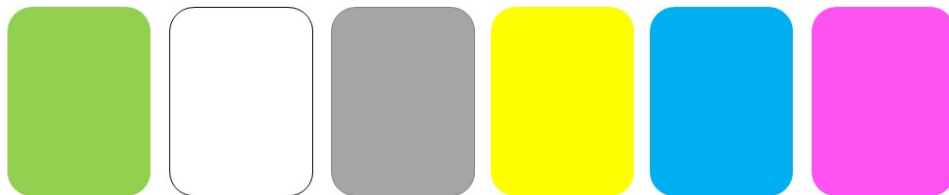
Syllable combination



Slide # 201

3

Syllable combination



Slide # 202

3

Syllable combination

Practice adding and deleting sounds.

Slide # 203

3

Syllable combination



= /e/

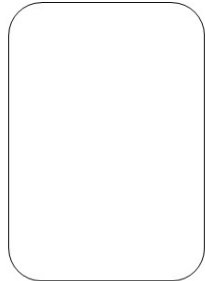
Slide # 204

3**Syllable combination****= /s/**

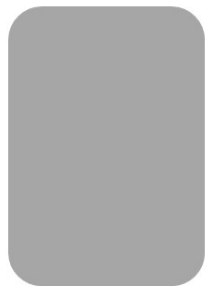
Slide # 205

3**Syllable combination****= /t/**

Slide # 206

3**Syllable combination****= /o/**

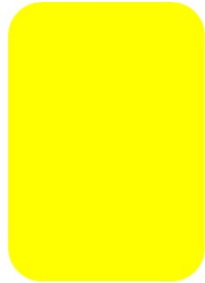
Slide # 207

3**Syllable combination****= /p/**

Slide # 208

3

Syllable combination

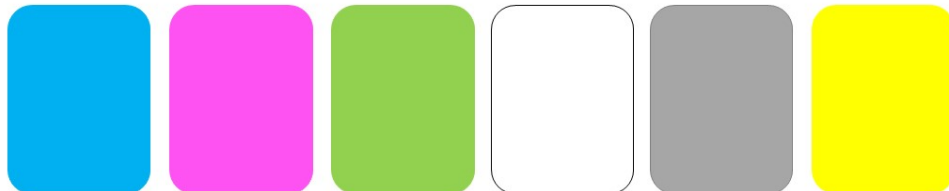


= /a/

Slide # 209

3

Syllable combination



Slide # 210

3

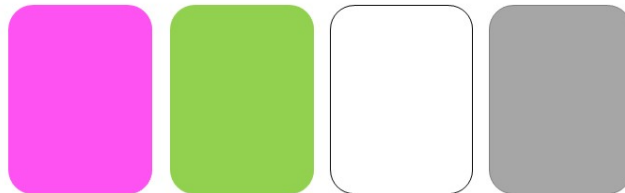
Syllable combination



Slide # 211

3

Syllable combination



Slide # 212

3

Syllable combination

See handout with a suggested pacing to develop this stage.

Slide # 213

4

Logic

Objective:

Children understand that changing the order of sounds will always result in a new combination.

Slide # 214

4

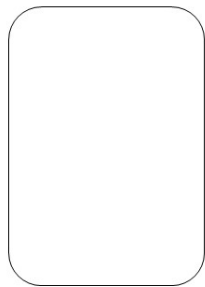
Logic

 $= /s/$

Slide # 215

4

Logic

 $= /o/$

Slide # 216

4

Logic



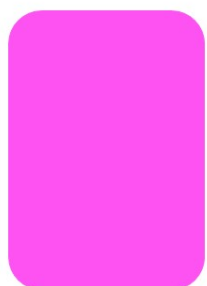
=

/f/

Slide # 217

4

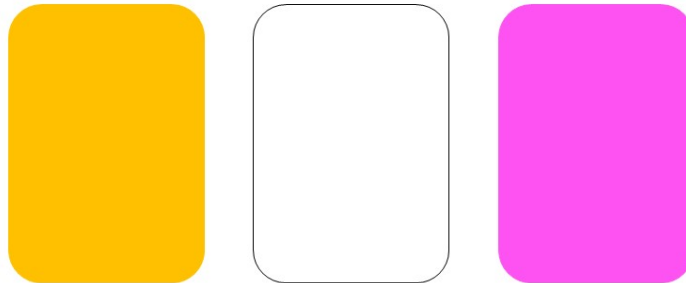
Logic



Slide # 218

4

Logic



Slide # 219

4

Logic

Change the order of colors and ask children to pronounce the resulting combinations.

Slide # 220

4

Logic

Do the two combinations sound the same?

Slide # 221

4

Logic

Are we adding or omitting any sounds?

Slide # 222

4

Logic

Why do the two combinations
sound differently?

Slide # 223

4

Logic

See handout with a suggested pacing
to develop this stage.

Slide # 224

5

Phoneme–grapheme correspondence

Objective:

Children understand that every sound
has one or multiple graphic
representations called letters.

Slide # 225

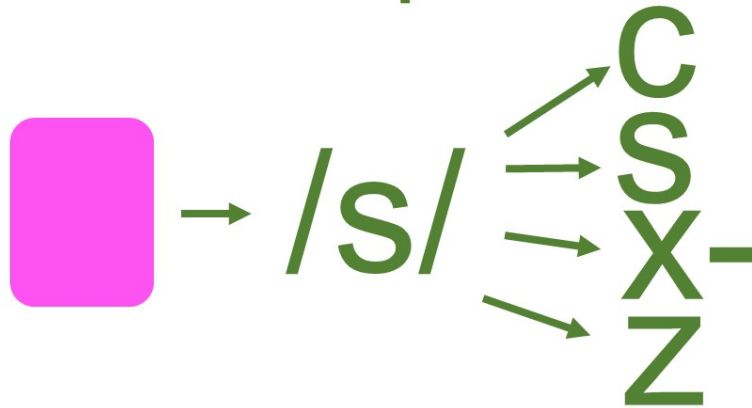
5

Phoneme–grapheme correspondence

Children understand the difference
between sound and name of the letter
that represents every sound.

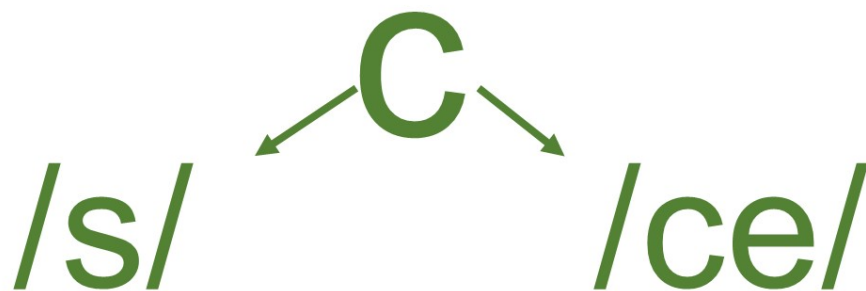
Slide # 226

5

Phoneme–grapheme
correspondence

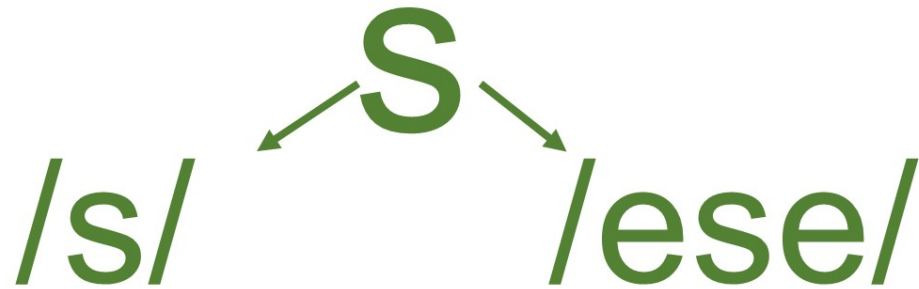
Slide # 227

5

Phoneme–grapheme
correspondence

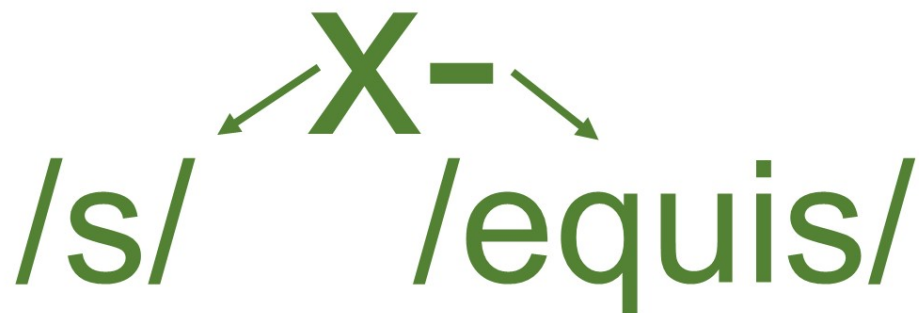
Slide # 228

5

Phoneme–grapheme
correspondence

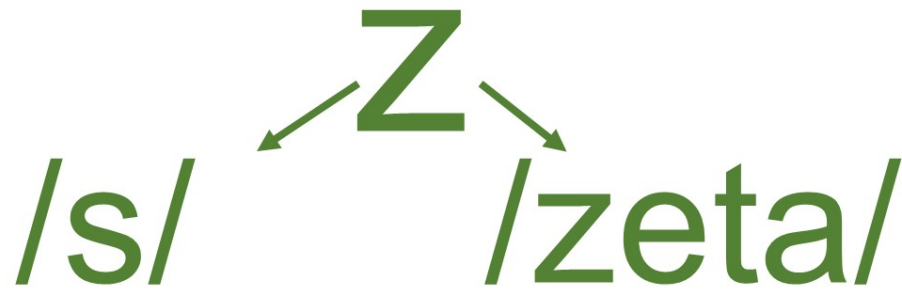
Slide # 229

5

Phoneme–grapheme
correspondence

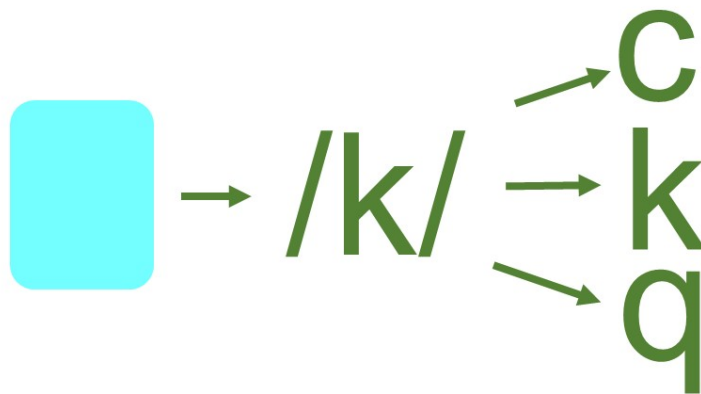
Slide # 230

5

Phoneme–grapheme
correspondence

Slide # 231

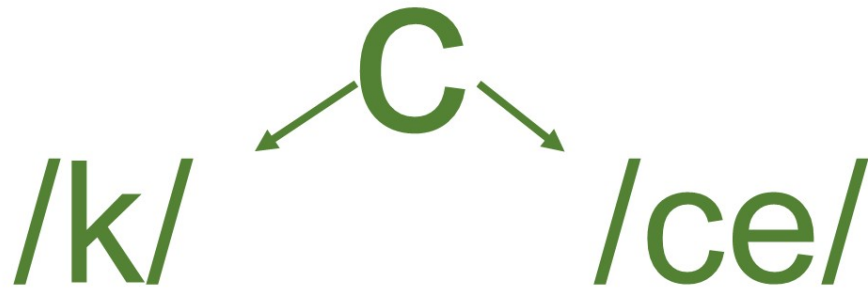
5

Phoneme–grapheme
correspondence

Slide # 232

5

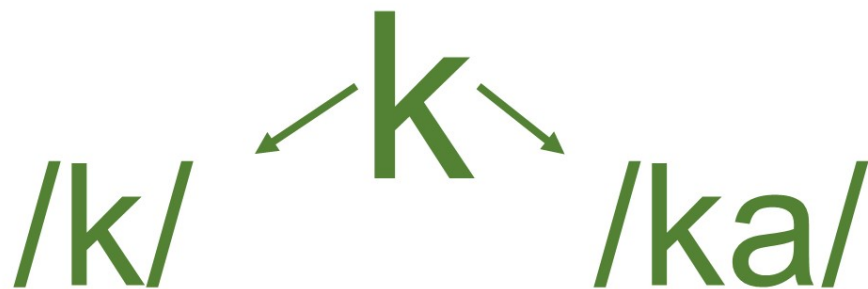
Phoneme–grapheme correspondence



Slide # 233

5

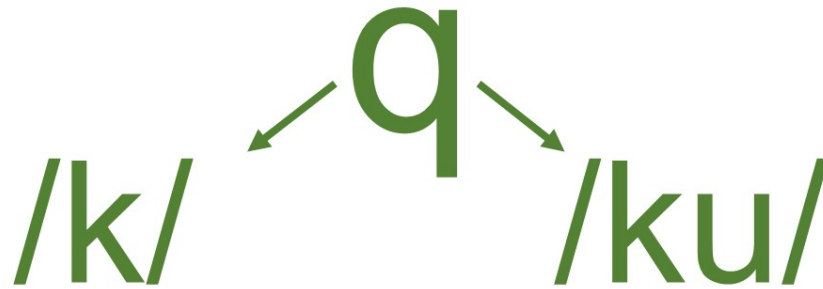
Phoneme–grapheme correspondence



Slide # 234

5

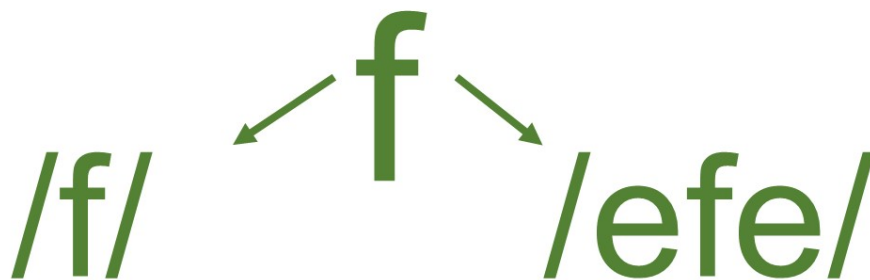
Phoneme–grapheme correspondence



Slide # 235

5

Phoneme–grapheme correspondence



Slide # 236

5

Phoneme–grapheme correspondence



Slide # 237

5

Phoneme–grapheme correspondence

Children's fine motor skills to trace every letter in the alphabet are exercised since stage 1.

Slide # 238

1



Slide # 239

5

Phoneme–grapheme correspondence

See handout with a suggested pacing
to develop this stage.

Slide # 240

Now that children are familiar with the individual sounds in their first language, they will be presumably able to pronounce English words more easily.

Slide # 241

snake
name
long
stop
like
need
salt
verb

Slide # 242

How to develop literate Spanish speakers' phonemic awareness in their first language

Slide # 243

4 stages

1. Sound combination
2. Syllable combination
3. Logic
4. Phoneme–grapheme
correspondence

Slide # 244

1

Sound combination

Objective:

Learners can identify, produce, and manipulate every single phoneme in Spanish.

Slide # 245

Literate Spanish-speaking learners usually identify and produce Spanish vowel sounds with relative ease.

Slide # 246

1

Sound combination

Use colors to represent consonant sounds in Spanish.

Slide # 247

1

Sound combination



= /s/

Slide # 248

1

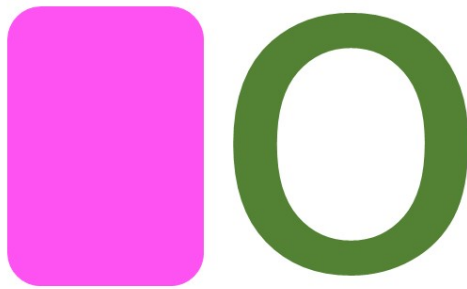
Sound combination

Combine colors (consonant sounds)
with vowels.

Slide # 249

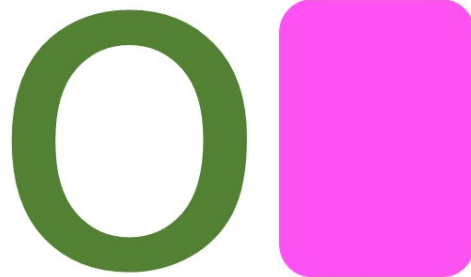
1

Sound combination



Slide # 250

1

Sound combination

Slide # 251

1

Sound combination

Slide # 252

1

Sound combination

Slide # 253

1

Sound combination

Slide # 254

1

Sound combination

2 sound combinations

- Consonant – vowel
- Vowel – consonant

Slide # 255

1

Sound combination

Make sure learners combine every vowel with every consonant sound.

Slide # 256

1

Sound combination

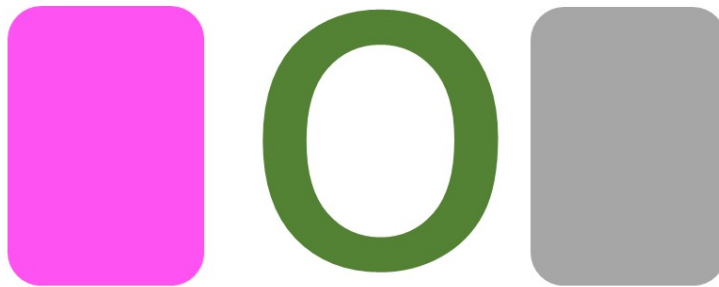
2+ sound combinations

- Consonant – vowel – consonant
- Consonant – consonant – vowel

Slide # 257

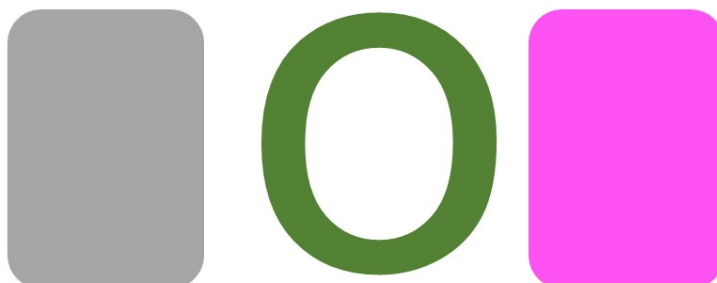
1

Sound combination



Slide # 258

1

Sound combination

Slide # 259

1

Sound combination

Slide # 260

1

Sound combination



=

/t/

Slide # 261

1

Sound combination

Practice combinations of sounds that are common in English, but rare or nonexistent in Spanish.

Slide # 262

1

Sound combination

Slide # 263

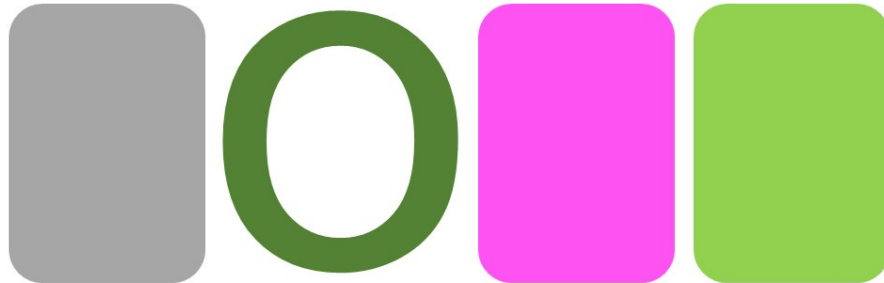
1

Sound combination

Slide # 264

1

Sound combination



Slide # 265

2

Syllable combination

Objective:

Learners can manipulate syllables in different positions.

Slide # 266

2

Syllable combination



= /s/

Slide # 267

2

Syllable combination



Slide # 268

2

Syllable combination

e 

Slide # 269

2

Syllable combination

 = /t/

Slide # 270

2

Syllable combination

Slide # 271

2

Syllable combination

Slide # 272

2 Syllable combination

The diagram illustrates a syllable combination. It features a large green number '2' to the left of the text 'Syllable combination'. Below this, the letters 'e' and 'o' are shown in a large, bold, green font. Between 'e' and 'o' are two colored squares: a pink square followed by a green square. The 'e' is positioned to the left of the pink square, and the 'o' is positioned to the right of the green square.

Slide # 273

2 Syllable combination

The diagram illustrates a syllable combination. It features a large green number '2' to the left of the text 'Syllable combination'. Below this, the letters 'o' and 'e' are shown in a large, bold, green font. To the left of 'o' is a green square, and to the right of 'e' is a pink square. The 'o' is positioned to the right of the green square, and the 'e' is positioned to the left of the pink square.

Slide # 274

2

Syllable combination

Slide # 275

2

Syllable combination

Slide # 276

2

Syllable combination

a 

Slide # 277

2

Syllable combination

 = /s/

Slide # 278

2

Syllable combination



=

/t/

Slide # 279

2

Syllable combination

e



o

Slide # 280

2

Syllable combination



= /p/

Slide # 281

2

Syllable combination

e   o  a

Slide # 282

2 Syllable combination



The diagram illustrates the syllable combination for the sequence 'aeo'. It features a large green number '2' to the left of the text 'Syllable combination'. Below this, the letters 'ae' and 'o' are shown in a large green font. A grey square is positioned to the left of 'ae', a pink square is to the right of 'ae', and a green square is to the left of 'o'.

Slide # 283

2 Syllable combination



The diagram illustrates the syllable combination for the sequence 'oea'. It features a large green number '2' to the left of the text 'Syllable combination'. Below this, the letters 'o' and 'ae' are shown in a large green font. A green square is positioned to the left of 'o', a grey square is to the right of 'o', and a pink square is to the right of 'ae'.

Slide # 284

2

Syllable combination

Practice adding and deleting sounds.

Slide # 285

2

Syllable combination



= /s/

Slide # 286

2

Syllable combination

=

/t/

Slide # 287

2

Syllable combination

=

/p/

Slide # 288

2 Syllable combination

e ■ ■ o ■ a

Slide # 289

2 Syllable combination

■ ■ o ■ a

Slide # 290

2

Syllable combination



Slide # 291

3

Logic

Objective:

Learners understand that changing the order of sounds will always result in a new combination.

Slide # 292

3

Logic



=

/t/

Slide # 293

3

Logic



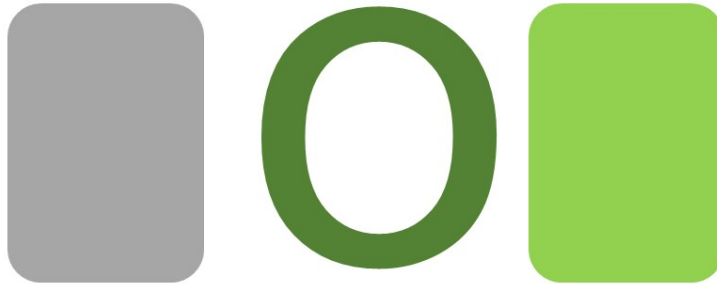
=

/p/

Slide # 294

3

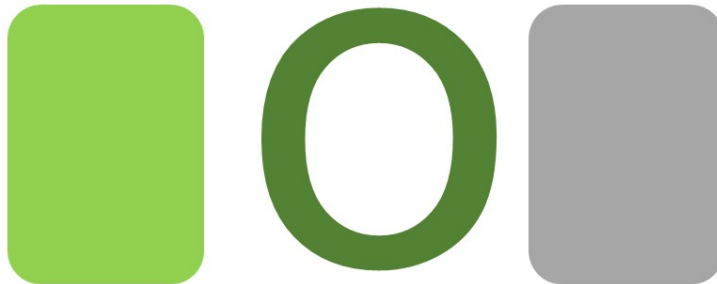
Logic



Slide # 295

3

Logic



Slide # 296

4

Phoneme–grapheme correspondence

Objective:

Learners understand that every sound has one or multiple graphic representations (letters).

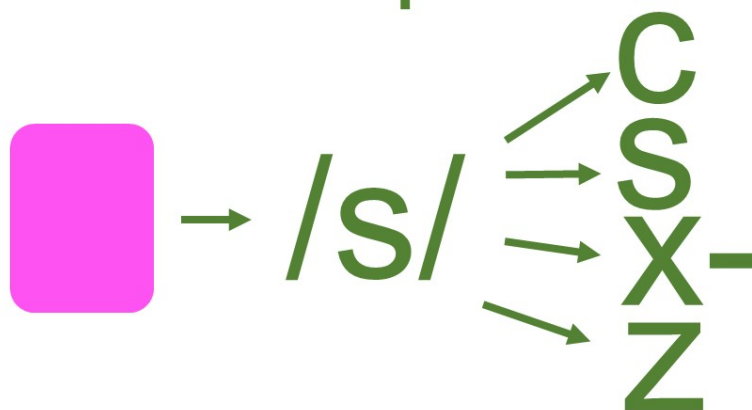
Slide # 297

Phoneme–grapheme correspondence

Learners understand the difference between sound and name of the letter(s) that represents every sound.

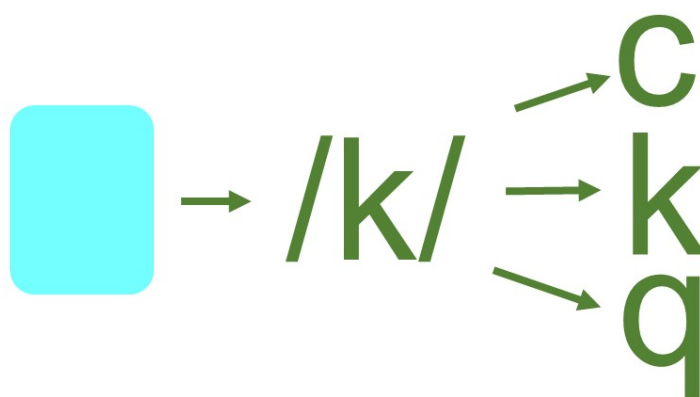
Slide # 298

4

Phoneme–grapheme
correspondence

Slide # 299

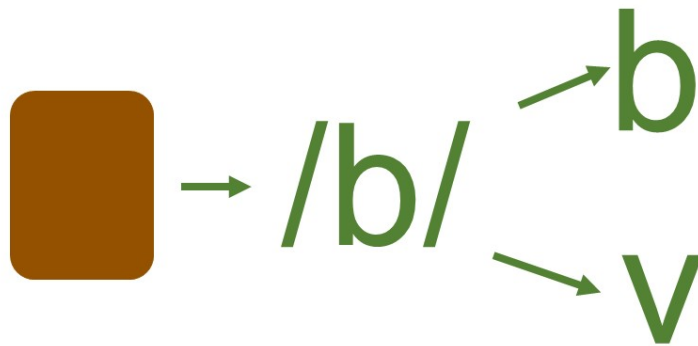
4

Phoneme–grapheme
correspondence

Slide # 300

4

Phoneme–grapheme correspondence



Slide # 301

Now that learners are familiar with the individual sounds in their first language, they will be presumably able to pronounce English words more easily.

Slide # 302

Suggestions

Colors are a fundamental component
of this method.

Use as many different colored
resources as possible.

Slide # 303

Suggestions



Slide # 304

Suggestions



Slide # 305

Suggestions



Slide # 306

Suggestions



Slide # 307

Suggestions



Slide # 308

Time to create!

Think of an activity you could do that combines sounds and colors.
Use the previous resources or consider new ones.

5 minutes

Slide # 309

Time to share your ideas!



Slide # 310

Questions or comments

Slide # 311

¡Muchas gracias!

Slide # 312

Jhon Méndez
jjmendez1986@gmail.com

Slide # 313

Appendix B: Pacing

Follow this suggested pacing to develop the different steps in the development of Spanish phonemic awareness.

First step: Initial sound identification

The objective is that at the end of this step, learners will be able to identify and produce every phoneme in Spanish. The following table presents a suggested pacing to teach every individual phoneme. Facilitators of this procedure should plan to teach one phoneme at a time. A single lesson focusing on one phoneme could take between 30 to 60 minutes depending on the size of the class as well as the number and type of activities. Likewise, lessons should be planned integrating contents from different subject fields and skills children are expected to develop for their age group or grade level.

Procedure

1. Look at the list of sounds to be taught and create a list of 23 words in Spanish.
2. Make sure learners are familiar with every word in the list and that every word is meaningful to them.
3. Every word must have one of the 23 targeted sounds at the beginning. Sound /x/ is the only exception. This sound can be in any other position in the word because /x/ sounds the same as /s/ in initial position.
4. Finally, remember you will design an integrated-based learning lesson with every word. Keep this mind to select words that could serve as leading topics.

Lesson	Sound
1.	/a/, /e/, /i/, /o/, /u/
2.	/s/
3.	/f/
4.	/m/
5.	/ch/
6.	Review
7.	/l/
8.	/k/
9.	/r/
10.	/t/
11.	Review
12.	/j/
13.	/b/
14.	/n/
15.	/y/

Lesson	Sound
16.	Review
17.	/d/
18.	/g/
19.	/ñ/
20.	Review
21.	/p/
22.	/rr/
23.	/-x-/
24.	Review
25.	Review all sounds
26.	Review all sounds
27.	Review all sounds
28.	Review all sounds
29.	Review all sounds

Second step: Sound combination

The objective of the second step is to teach learners how to combine sounds using colors. First, use colored cards to create the combinations of sounds. Later, use any other resource that is available or suitable to reach the expected goal. A

Procedure

1. Assign every vowel sound a particular color that will represent it for the entire instructional process.
2. Follow the suggested sequence of combinations below. Make changes as needed.
3. Reuse colors, if necessary, to represent consonant sounds. Make sure every color does not represent more than two sounds.

Lesson	Sounds	Combinations
1.	Vowel sounds + /f/	/fa/, /fe/, /fi/, /fo/, /fu/ /af/, /ef/, /if/, /of/, /uf/
2.	Vowel sounds + /s/	/sa/, /se/, /si/, /so/, /su/ /as/, /es/, /is/, /os/, /us/
3.	Vowel sounds + /f/ and /s/	/fas/, /fes/, /fis/, /fos/, /fus/ /saf/, /sef/, /sif/, /sof/, /suf/
4.	Vowel sounds + consonant sounds	All possible
5.	Vowel sounds + /ch/	/cha/, /che/, /chi/, /cho/, /chu/ /ach/, /ech/, /ich/, /och/, /uch/
6.	Vowel sounds + /l/	/la/, /le/, /li/, /lo/, /lu/ /al/, /el/, /il/, /ol/, /ul/
7.	Vowel sounds + /ch/ and /l/	/chal/, /chel/, /chil/, /chol/, /chul/ /lach/, /lech/, /lich/, /loch/, /luch/
8.	Vowel sounds + consonant sounds	All possible
9.	Vowel sounds + /m/	/ma/, /me/, /mi/, /mo/, /mu/ /am/, /em/, /im/, /om/, /um/
10.	Vowel sounds + /k/	/ka/, /ke/, /ki/, /ko/, /ku/ /ak/, /ek/, /ik/, /ok/, /uk/
11.	Vowel sounds + /m/ and /k/	/kam/, /kem/, /kim/, /kom/, /kum/ /mak/, /mek/, /mik/, /mok/, /muk/
12.	Vowel sounds + consonant sounds	All possible
13.	Vowel sounds + /n/	/na/, /ne/, /ni/, /no/, /nu/ /an/, /en/, /in/, /on/, /un/
14.	Vowel sounds + /r/	/ira/, /ire/, /iri/, /iro/, /iru/
15.	Vowel sounds + /n/ and /r/	/ran/, /ren/, /rin/, /ron/, /run/ /nar/, /ner/, /nir/, /nor/, /nur/
16.	Vowel sounds + consonant sounds	All possible
17.	Vowel sounds + /t/	/ta/, /te/, /ti/, /to/, /tu/ /at/, /et/, /it/, /ot/, /ut/

18.	Vowel sounds +/rr/	/rra/, /rre/, /rri/, /rro/, /rru/ /arr/, /err/, /irr/, /orr/, /urr/
19.	Vowel sounds +/t/ and /r/	/rrat/, /rret/, /rrit/, /rrot/, /rrut/ /tarr/, /terr/, /tirr/, /torr/, /turr/
20.	Vowel sounds + consonant sounds	All possible
21.	Vowel sounds + /p/	/pa/, /pe/, /pi/, /po/, /pu/ /apa/, /epa/, /ipa/, /opa/, /upa/
22.	Vowel sounds + /b/	/ba/, /be/, /bi/, /bo/, /bu/ /abi/, /ebi/, /ibi/, /obi/, /ubi/
23.	Vowel sounds + /j/	/ja/, /je/, /ji/, /jo/, /ju/ /aju/, /eju/, /iju/, /oju/, /uju/
24.	Vowel sounds + /y/	/ya/, /ye/, /yi/, /yo/, /yu/ /aye/, /eye/, /iye/, /oye/, /uye/
25.	Vowel sounds + consonant sounds	All possible
26.	Vowel sounds + /d/	/da/, /de/, /di/, /do/, /du/ /ado/, /edo/, /ido/, /odo/, /udo/
27.	Vowel sounds + /g/	/ga/, /ge/, /gi/, /go/, /gu/ /ago/, /ego/, /igo/, /ogo/, /ugo/
28.	Vowel sounds + /ñ/	/ña/, /ñe/, /ñi/, /ño/, /ñu/ /año/, /eño/, /iño/, /oño/, /uño/
29.	Vowel sounds + /x/	/axe/, /exe/, /ixe/, /oxe/, /uxe/
30.	Vowel sounds + consonant sounds Make sure to practice this pattern: Consonant + consonant + vowel	Largest combinations possible
31.	Vowel sounds + consonant sounds	Largest combinations possible
32.	Vowel sounds + consonant sounds	Largest combinations possible
33.	Vowel sounds + consonant sounds	Largest combinations possible
34.	Vowel sounds + consonant sounds	Largest combinations possible

Third step: Syllable combination

This step also requires colors to combine sounds, but now the goal is to combine syllables. There is not a suggested pacing for this step. Instead, practice creating combinations with the number of syllables and pattern of sound arrangement within syllables that you see necessary. Make sure you practice adding and omitting sounds, so learners pronounce combinations that start and end with consonant sounds that are common in English but rare or nonexistent in Spanish. Continue with the next step when learners are able to easily move syllables within a sequence and pronounce all combinations possible.

Fourth step: Logic

The goal in this step is to make sure learners understand that changing the order of sounds will always result in a new combination. To confirm the objective of this step, learners pronounce a three-sound combination from left to right. Next, the first and last colored cards are swapped, and learners pronounce the combination once again. After this, learners answer the following questions:

- Do the two combinations sound the same?

- Are we adding or omitting sounds?
- Why do the two combinations sound differently?

Suggested combinations for this stage:

Combinations
/los/ /sol/
/los/ /sol/
/paso/, /posa/, /sapo/, /sopa/
/paso/, /posa/, /sapo/, /sopa/

Fifth step: Phoneme-grapheme correspondence

In this last step, the goal is to teach learners that every sound (phoneme) has one or multiple graphic representations (grapheme). Learners also understand the difference between sound and name of the letter. Remember at this point illiterate learners have been developing their fine motor skills to trace every letter Spanish since the first step, initial sound identification.

Lesson	Sound
1.	a, e, i, o, u
2.	a, e, i, o, u
3.	a, e, i, o, u
4.	m
5.	p
6.	t
7.	Review
8.	f
9.	d
10.	g
11.	j
12.	l
13.	Review
14.	n
15.	ñ
16.	b
17.	v
18.	Review
19.	r

Lesson	Sound
20.	rr
21.	Review
22.	k
23.	c
24.	qu
25.	Review
26.	Review
27.	s
28.	z
29.	c
30.	x
31.	review
32.	_x_ (mid position)
33.	ll
34.	y
35.	h
36.	w
37.	Review

References

- Atwill, K., Blanchard, J., Gorin, J. S., & Burstein, K. (2007). Receptive vocabulary and cross-language transfer of phonemic awareness in kindergarten children. *The Journal of Educational Research*, 100(6), 336-345,384. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/204199454?accountid=11207>
- Ashby, J., Dix, H., Bontrager, M., Dey, R., & Archer, A. (2013). Phonemic awareness contributes to text reading fluency: Evidence from eye movements. *School Psychology Review*, 42(2), 157-170. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/1415379571?accountid=11207>
- Beth, A. O., Malikka Begum, H. M., Yussof, N. T., & Siew, C. N. (2019). The phonological awareness relation to early reading in English for three groups of simultaneous bilingual children. *Reading and Writing*, 32(4), 909-937. doi:2067/10.1007/s11145-018-9890-1
- Brice, R. G., & Brice, A. E. (2009). Investigation of phonemic awareness and phonic skills in Spanish-English bilingual and English-speaking kindergarten students. *Communication Disorders Quarterly*, 30(4), 208-225. doi:2067/10.1177/1525740108327448
- Chang, D., & Heift, T. (2015). L1 influence on phonemic perception: A case study with native English and Mandarin learners of German. *Die Unterrichtspraxis*, 48(1), 84-IV,162. doi:2067/10.1111/tger.10182

Corinne, R. S. (1998). From gibberish to phonemic awareness: Effective decoding instruction.

Teaching Exceptional Children, 30(6), 20. Retrieved from

<http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/201162513?accountid=11207>

Cowan, N. (2014). Working memory underpins cognitive development, learning, and education.

Educational Psychology Review, 26(2), 197-223. doi:10.1007/s10648-013-9246-y

de Jong, T. (2010). Cognitive load theory, educational research, and instructional design: Some

food for thought. *Instructional Science*, 38(2), 105-134. doi:10.1007/s11251-009-9110-0

Dirksen, J. (2016). *Design for how people learn*. Berkeley, CA: New Riders.

Durgunoglu, A. Y. (2002). Cross-linguistic transfer in literacy development and implications for

language learners. *Annals of Dyslexia*, 52, 189-204. doi:2119/10.1007/s11881-002-0012-y

Freeman, D., & Freeman, Y. S. (1999). The California reading initiative: A formula for failure

for bilingual students? *Language Arts*, 76(3), 241-248. Retrieved from

<http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/196913915?accountid=11207>

Frost, J. (2001). Phonemic awareness, spontaneous writing, and reading and spelling

development from a preventive perspective. *Reading and Writing*, 14(5-6), 487-513.

doi:2119/10.1023/A:1011143002068

- Gil, C. C., & Méndez, J. J. (2015). *Iniciación en Lectura y Escritura a través de Conciencia Fonológica*. Unpublished manuscript, Language Center, EAFIT University, Medellín, Colombia.
- Griffith, P. & Olson, M. (1992). Phonemic awareness helps beginning readers break the code. *The Reading Teacher*, 45(7), 516. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203269843?accountid=11207>
- Hartsuiker, R. J., & Bernolet, S. (2017). The development of shared syntax in second language learning. *Bilingualism*, 20(2), 219-234. doi:2119/10.1017/S1366728915000164
- Hu, C., & Schuele, C. M. (2005). Learning nonnative names: The effect of poor native phonological awareness. *Applied Psycholinguistics*, 26(3), 343. doi:2067/10.1017/S0142716405050204
- Ijalba, E., & Obler, L. K. (2015). First language grapheme-phoneme transparency effects in adult second-language learning. *Reading in a Foreign Language*, 27(1), 47-70. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/1705665694?accountid=11207>
- Janssen, C., Segers, E., McQueen, J. M., & Verhoeven, L. (2017). Transfer from implicit to explicit phonological abilities in first and second language learners. *Bilingualism*, 20(4), 795-812. doi:10.1017/S1366728916000523
- Jill, M. L., & Michael, M. G. (2005). Crossover of phonological processing skills: A study of Spanish-speaking students in two instructional settings. *Remedial and Special Education*, 26(4), 226-235. doi:10.1177/07419325050260040501

- Kamii, C., & Manning, M. (2002). Phonemic awareness and beginning reading and writing. *Journal of Research in Childhood Education*, 17(1), 38-46. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203879590?accountid=11207>
- Kenner, B. B., Terry, N. P., Friehling, A. H., & Namy, L. L. (2017). Phonemic awareness development in 2.5- and 3.5-year-old children: An examination of emergent, receptive, knowledge and skills. *Reading and Writing*, 30(7), 1575-1594. doi:10.1007/s11145-017-9738-0
- Kumaravadivelu, B. (2003). *Beyond methods: Macrostrategies for language teaching*. New Haven, CT: Yale University Press.
- Kumaravadivelu, B. (2012). *Language teacher education for a global society: A modular model for knowing, analyzing, recognizing, doing, and seeing*. New York, NY: Routledge/Taylor and Francis.
- Lam, K., & Chen, X. (2018). The crossover effects of morphological awareness on vocabulary development among children in French immersion. *Reading and Writing*, 31(8), 1893-1921. doi:2119/10.1007/s11145-017-9809-2
- Loeb, D. F., Gillam, R. B., Hoffman, L., Brandel, J., & Marquis, J. (2009). The effects of fast ForWord language on the phonemic awareness and reading skills of school-age children with language impairments and poor reading skills. *American Journal of Speech - Language Pathology*, 18(4), 376-87. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/204294700?accountid=11207>

- Lombardino, L. J., Bedford, T., Fortier, C., Carter, J., & Brandi, J. (1997). Invented spelling: Developmental patterns in kindergarten children and guidelines for early literacy intervention. *Language, Speech & Hearing Services in Schools*, 28(4), 333. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/232585077?accountid=11207>
- Méndez, J. J., & Díaz, A. (2007). *The effect of Spanish phonemic awareness on the reading and writing skills and on the academic performance*. Department of Education, University of Quindío, Armenia, Colombia.
- Meyer, C. F. (2009) *Introducing English linguistics*. Cambridge: Cambridge University Press.
- Miller, P. (2007). The role of phonology in the word decoding skills of poor readers: Evidence from individuals with prelingual deafness or diagnosed dyslexia. *Journal of Developmental and Physical Disabilities*, 19(4), 385-408. doi:10.1007/s10882-007-9057-5
- Muter, V., & Snowling, M. (1998). Concurrent and longitudinal predictors of reading: The role of metalinguistic and short-term memory skills. *Reading Research Quarterly*, 33(3), 320. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/212119654?accountid=11207>
- Orton, J. G. (2000). Phonemic awareness and inventive writing. *New England Reading Association Journal*, 36(1), 17. Retrieved from

<http://libproxy.greensboro.edu:2048/login?url=https://search.proquest.com/docview/206040142?accountid=11207>

Raynolds, L. B., López-velásquez, A., & Olivo Valentín, L. E. (2017). Exploring English and Spanish rhyme awareness and beginning sound segmentation skills in prekindergarten Spanish-speaking English learners. *Reading and Writing, 30*(4), 719-737.
doi:10.1007/s11145-016-9696-y

Real Academia Española. (2020). *Exclusión de ch y ll del abecedario*.

<https://www.rae.es/consultas/exclusion-de-ch-y-ll-del-abecedario>

Real Academia Española. (2020). *Representación de sonidos*. <https://www.rae.es/diccionario-panhispanico-de-dudas/representacion-de-sonidos>

Snider, V. E. (1997). The relationship between phonemic awareness and later reading achievement. *The Journal of Educational Research, 90*(4), 203. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/204193455?accountid=11207>

Sparks, R. L., Patton, J., Ganschow, L., Humbach, N., & Javorsky, J. (2006). Native language predictors of foreign language proficiency and foreign language aptitude. *Annals of Dyslexia, 56*(1), 129-60. doi:2067/10.1007/s11881-006-0006-2

Speciale, G., Ellis, N. C., & Bywater, T. (2004). Phonological sequence learning and short-term store capacity determine second language vocabulary acquisition. *Applied Psycholinguistics, 25*(2), 293. doi:10.1017/S0142716404001146

Sun-alperin, M., & Wang, M. (2011). Cross-language transfer of phonological and orthographic processing skills from Spanish L1 to English L2. *Reading and Writing*, 24(5), 591-614.

doi:2067/10.1007/s11145-009-9221-7

Walter, N. (2010). The effects of intervention in phonemic awareness on the reading achievement of English language learners in kindergarten (Order No. 3400882).

Available from Education Database. (89201783). Retrieved from

[http://libproxy.greensboro.](http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2058/docview/89201783?accountid=11207)

[edu:2048/login?url=https://libproxy.greensboro.edu:2058/docview/89201783?accountid=11207](http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2058/docview/89201783?accountid=11207)

Washburn, E. K., Binks-Cantrell, E., Joshi, R. M., Martin-Chang, S., & Arrow, A. (2016).

Preservice teacher knowledge of basic language constructs in Canada, England, New Zealand, and the USA. *Annals of Dyslexia*, 66(1), 7-26. doi:2119/10.1007/s11881-015-0115-x

Wasik, B. A. (2001). Phonemic awareness and young children. *Childhood Education*, 77(3), 128-133. Retrieved from

<http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/210382452?accountid=11207>

Willingham, D. T. (2009). *Why don't students like school: A cognitive scientist answers questions about how the mind works and what it means for the classroom*. San Francisco, CA: Jossey-Bass

- Wise, N., D'Angelo, N., & Chen, X. (2016). A school-based phonological awareness intervention for struggling readers in early French immersion. *Reading and Writing*, 29(2), 183-205. doi:10.1007/s11145-015-9585-9
- Xu, F. (2016). Short-term working memory and chunking in SLA. *Theory and Practice in Language Studies*, 6(1), 119-126. doi:10.17507/tpls.0601.16
- Yopp, H. K. (1995). A test for assessing phonemic awareness in young children. *The Reading Teacher*, 49(1), 20. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203266734?accountid=11207>
- Yopp, H. K., & Stapleton, L. (2008) Conciencia fonémica en Español (Phonemic awareness in Spanish). *The Reading Teacher*, 61(5), 374–382. doi:10.1598/RT.61.5.2
- Yopp, H. K., & Yopp, R. H. (2000). Supporting phonemic awareness development in the classroom. *The Reading Teacher*, 54(2), 130-143. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/203273838?accountid=11207>
- Yopp, H. K., & Yopp, R. H. (2009). Phonological awareness is child's play! *YC Young Children*, 64(1), 12-18,21. Retrieved from <http://libproxy.greensboro.edu:2048/login?url=https://libproxy.greensboro.edu:2078/docview/197599938?accountid=11207>
- Zheng, T., & Liu, Q. (2018). Influence of negative transfer of mother tongue on Chinese English learners' pronunciation. *Theory and Practice in Language Studies*, 8(11), 1478-1484. doi:2067/10.17507/tpls.0811.12